

FIG. 1

DIRECTORY STRUCTURE OF STILL PICTURE FILE, AUDIO FILE, AND TEXT
FILE ASSOCIATED WITH RECORDABLE/REPRODUCIBLE AUDIO INFORMATION
RECORDED IN INFORMATION STORAGE MEDIUM

ROOT DIRECTORY 200

SUBDIRECTORY 201

DVD_RTAV (DIGITAL VERSATILE DISC REAL-TIME
AUDIO VIDEO) DIRECTORY 210

202

AR_MANGR.IFO 211
(MANAGER INFORMATION OBJECT OF AUDIO RECORDING)
(MANAGEMENT INFORMATION RECORDING AREA 130)

VR_MOVIE.VRO 212
(MOVIE OBJECT OF VIDEO RECORDING)
(VR_MOVIE OBJECT RECORDING AREA 131)

AR_STILL.ARO 213
(STILL PICTURE OBJECT OF AUDIO RECORDING; AR_STILL.ARO)
(AR_STILL PICTURE OBJECT RECORDING AREA 132)

AR_AUDIO.ARO 221
(AUDIO OBJECT OF AUDIO RECORDING; AR_AUDIO.ARO)
(AR_AUDIO OBJECT RECORDING AREA 133)

AR_RT_TEXT.ARO 222
(REAL-TIME TEXT OBJECT OF AUDIO RECORDING)
(AR_REAL-TIME OBJECT RECORDING AREA 134)

AR_MANGR.BUP 215
(BACKUP OF MANAGER INFORMATION OF AUDIO RECORDING)
(MANAGEMENT INFORMATION RECORDING AREA 130)

OTHER SUBDIRECTORIES 230

FIG. 2

EXAMPLE OF MANAGEMENT INFORMATION DATA STRUCTURE THAT PERTAINS TO AUDIO INFORMATION RECORDED IN INFORMATION STORAGE MEDIUM

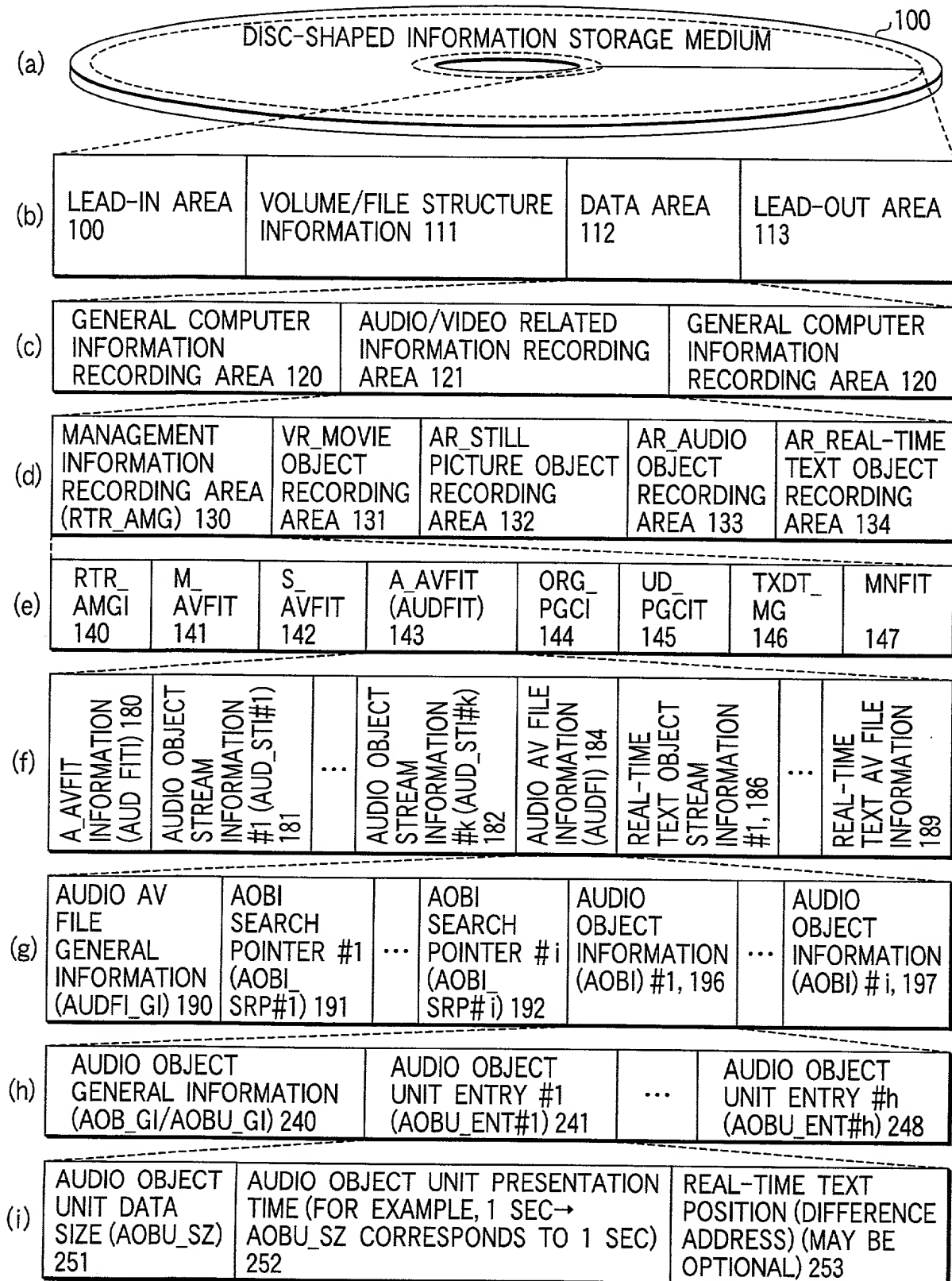


FIG. 3

EXAMPLE OF MANAGEMENT INFORMATION DATA STRUCTURE THAT PERTAINS TO STILL PICTURE INFORMATION RECORDED IN INFORMATION STORAGE MEDIUM

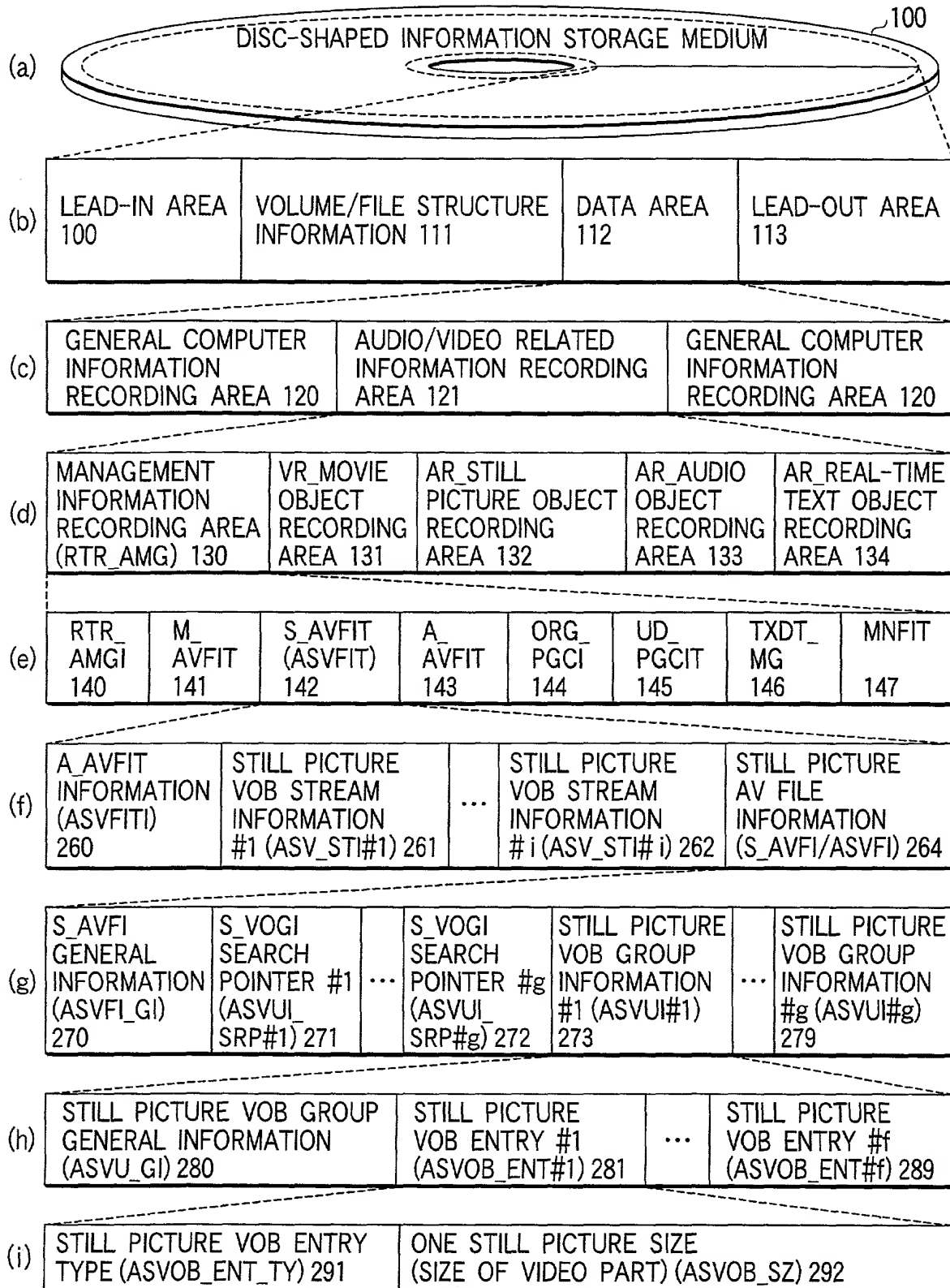


FIG. 4

EXAMPLE OF MANAGEMENT INFORMATION DATA STRUCTURE THAT PERTAINS TO TEXT INFORMATION RECORDED IN INFORMATION STORAGE MEDIUM

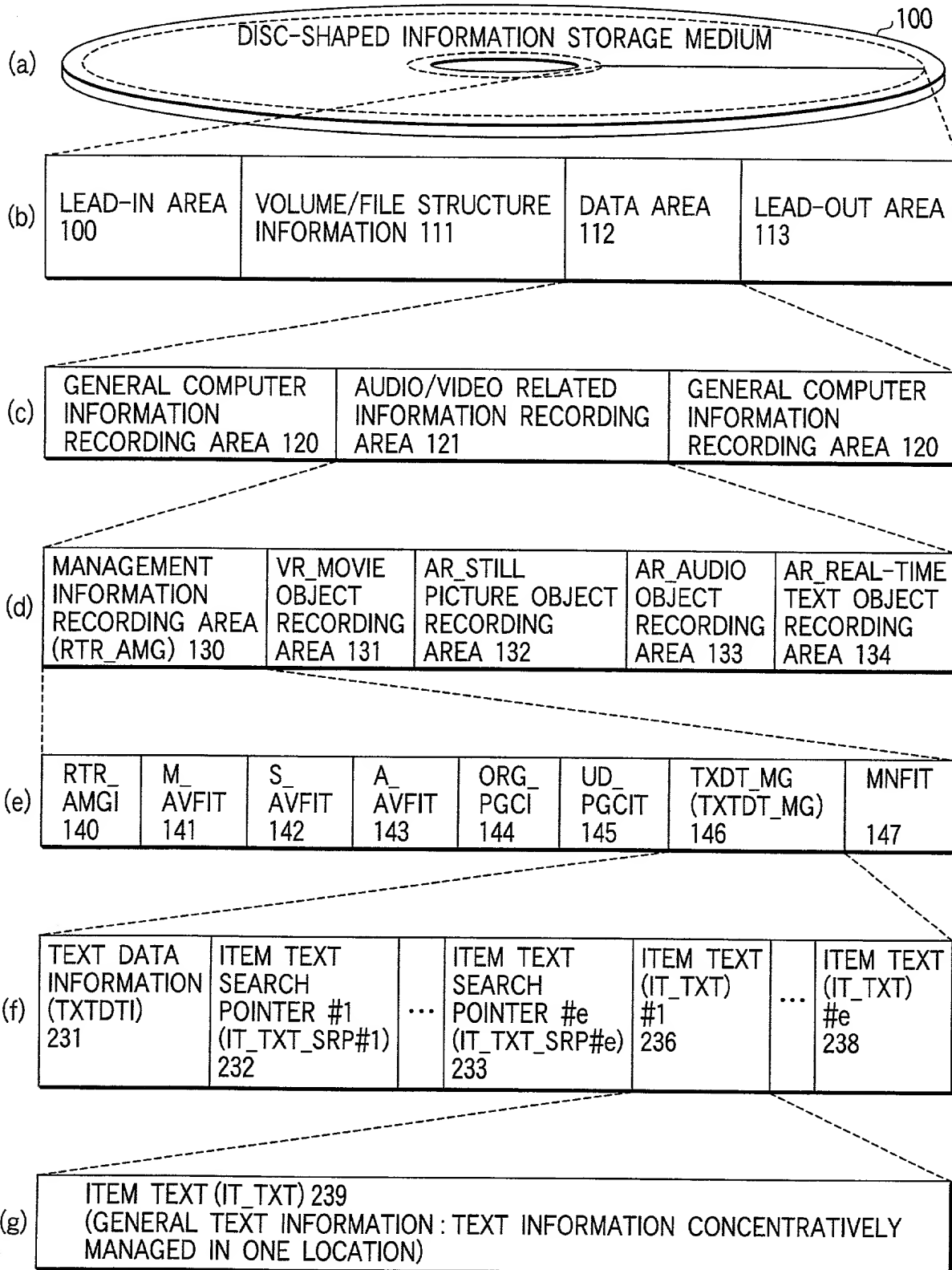


FIG. 5

WINDOW IMAGE UPON CREATION



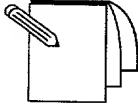

ORIGINAL TRACK 1			
TRACK TITLE 3	PICTURE 5	DISPLAY MODE 7	TIME CHART 11
AUTOMATIC		SLIDESHOW SEQUENTIAL	<div> <div>A B C D</div> <div>0 45 68 107 130</div> </div>
FIRST LOVE		SLIDESHOW SHUFFLE	<div> <div>A B</div> <div>0 52 105</div> </div>
IN MY ROOM		BROWSABLE SEQUENTIAL	
ANOTHER CHANCE		BROWSABLE RANDOM	<div> <div>A B C</div> <div>0 108 214</div> </div>
.....

FIG. 6A




PLAY LIST #1 2				
NEW TRACK TITLE 4	MIXING RATE 9	DISPLAY MODE 8	STILL 10	PICTURE 6
NEW TRACK No.1 (C1 #1 164) (+C1 #1 165) (+C1 #1 166)	AUTOMATIC A-B ANOTHER CHANCE A-B ANOTHER CHANCE B-C	SLIDESHOW SEQUENTIAL	ORIGINAL	
NEW TRACK No.2 (C1 #4 167)	IN MY ROOM	BROWSABLE RANDOM	NEWLY SET	
NEW TRACK No.3 (C1 #5 168) (+C1 #6 169)	FIRST LOVE A-B & AUTOMATIC C-D	SLIDESHOW SEQUENTIAL	ORIGINAL	
.....

FIG. 6B

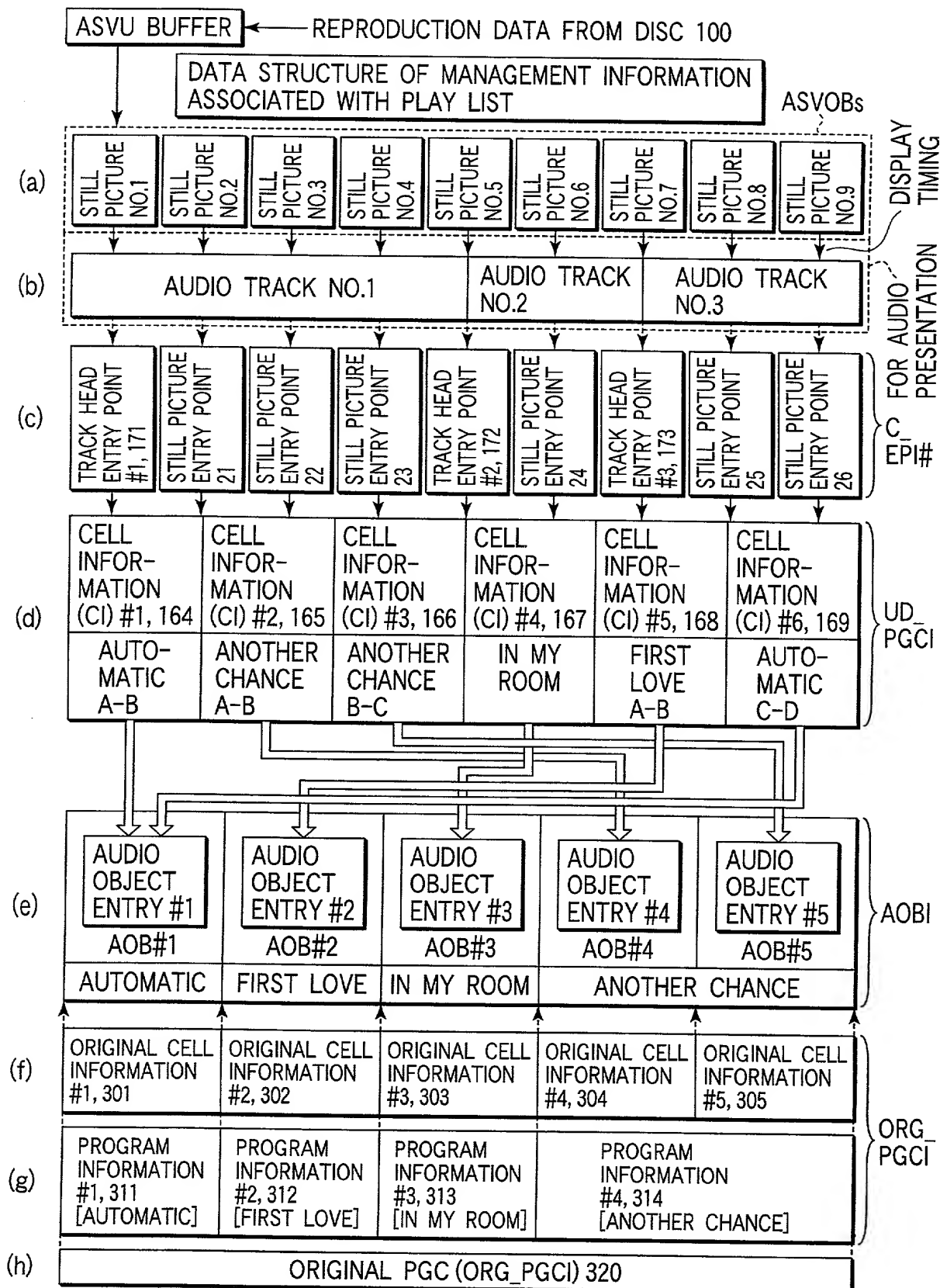


FIG. 7

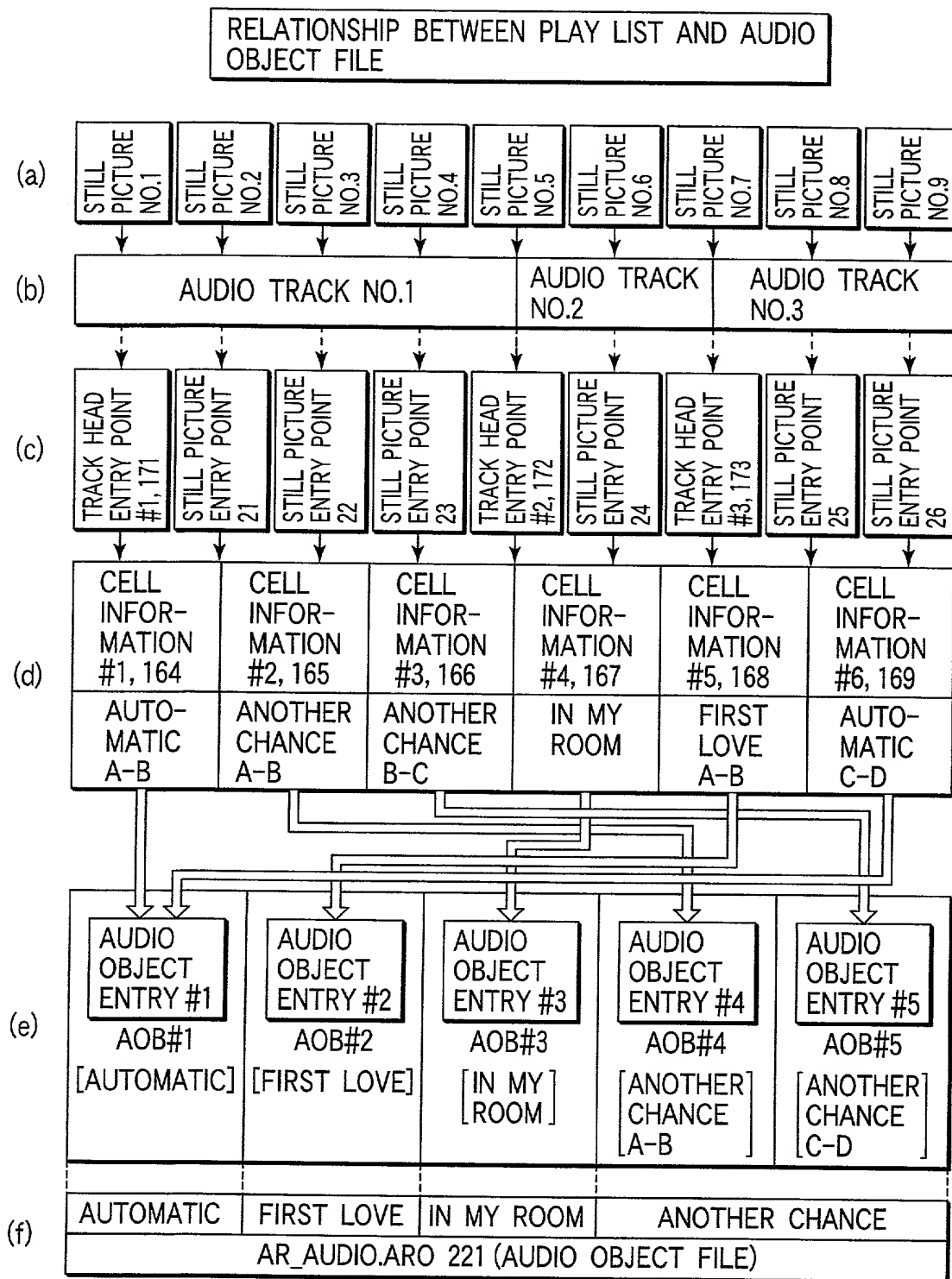


FIG. 8

COMPARISON OF INFORMATION CONTENTS RECORDED IN TRACK HEAD
ENTRY POINT (PROGRAM INFORMATION) AND STILL PICTURE ENTRY POINT

ENTRY POINT TYPE	INFORMATION CONTENTS IN VARIOUS KINDS OF ENTRY POINTS/PROGRAM INFORMATION
TRACK HEAD ENTRY POINTS 171 TO 173 OR PROGRAM INFORMATION 311 TO 314	<p>◎ENTRY POINT TYPE INFORMATION (EP_TY) ...IDENTIFICATION INFORMATION INDICATING TRACK HEAD ENTRY POINT OR STILL PICTURE ENTRY POINT</p> <p>◎INFORMATION (EP_PTM & RA_DUR) OF DISPLAY RANGE OF REPRESENTATIVE AUDIO (ENTRY POINT FOR REPRESENTATIVE AUDIO) INDICATING CONTENTS OF CORRESPONDING AUDIO TRACK ...DESIGNATED BY PLAYBACK START TIME AND PLAYBACK END TIME IN CORRESPONDING AUDIO TRACK</p> <p>◎INFORMATION (REP_PICTI) FOR DESIGNATING THE SAVING LOCATION OF REPRESENTATIVE IMAGE THAT REPRESENTS CONTENTS OF CORRESPONDING AUDIO TRACK ...DESIGNATED BY S_VOIGI SEARCH POINTER NUMBER (STILL PICTURE VOB GROUP NUMBER) AND VOB ENTRY NUMBER THEREIN</p> <p>◎INFORMATION FOR DESIGNATING THE SAVING LOCATION OF STILL PICTURE TO BE DISPLAYED FIRST UPON PLAYBACK OF CORRESPONDING AUDIO TRACK ...DESIGNATED BY S_VOIGI SEARCH POINTER NUMBER (STILL PICTURE VOB GROUP NUMBER) AND VOB ENTRY NUMBER THEREIN</p> <p>◎TEXT INFORMATION (PRIMARY TEXT INFORMATION PRM_ TXTI) UNIQUE TO CORRESPONDING AUDIO TRACK ...TUNE NAME, PLAYER NAME/SINGER NAME, WRITER NAME, ETC.</p> <p>◎ADDITIONAL COMMENT TEXT INFORMATION (IT_TXT_SRPN) (CENTRAL TEXT INFORMATION: ITEM TEXT 237, 238)</p> <p>◎DISPLAY MODE OF STILL PICTURE IN CORRESPONDING AUDIO TRACK (DISPLAY MODE) ...DISPLAY ORDER MODE/DISPLAY TIMING MODE</p> <p>◎DISPLAY TIME RANGE INFORMATION (EP_PTM) OF CORRESPONDING STILL PICTURE</p> <p>◎RELATIONSHIP BETWEEN CORRESPONDING STILL PICTURE CONTENTS AND ORIGINAL TRACK ...WHETHER SAME STILL PICTURES AS THOSE IN ORIGINAL TRACK ARE DISPLAYED OR UNIQUE STILL PICTURES DIFFERENT FROM THOSE IN ORIGINAL TRACKS ARE DISPLAYED (NEWLY SET)</p>

FIG. 9A

	<p>⊙ERASE INHIBITION/PROHIBITION FLAG ...ERASE INHIBITION INFORMATION</p>
<p>STILL PICTURE ENTRY POINTS 21 TO 26</p>	<p>⊙ENTRY POINT TYPE INFORMATION (EP_TY) ...IDENTIFICATION INFORMATION INDICATING TRACK HEAD ENTRY POINT OR STILL PICTURE ENTRY POINT ⊙INFORMATION (ASVOB_ENTN) FOR DESIGNATING THE SAVING LOCATION OF STILL PICTURE TO BE DISPLAYED ...DESIGNATED BY S_VOGI SEARCH POINTER NUMBER (STILL PICTURE VOB GROUP NUMBER) AND VOB ENTRY NUMBER THEREIN ⊙INFORMATION (EP_PTM) FOR DESIGNATING DISPLAY TIMING OF ABOVE STILL PICTURE ...DESIGNATES DISPLAY TIME INFORMATION OF CORRESPONDING AUDIO OBJECT TO ADJUST DISPLAY TIMING BETWEEN TWO OBJECTS ⊙DISPLAY TIME RANGE INFORMATION (MAX_DUR & MIN_ DUR) OF CORRESPONDING STILL PICTURE</p>

FIG. 9B

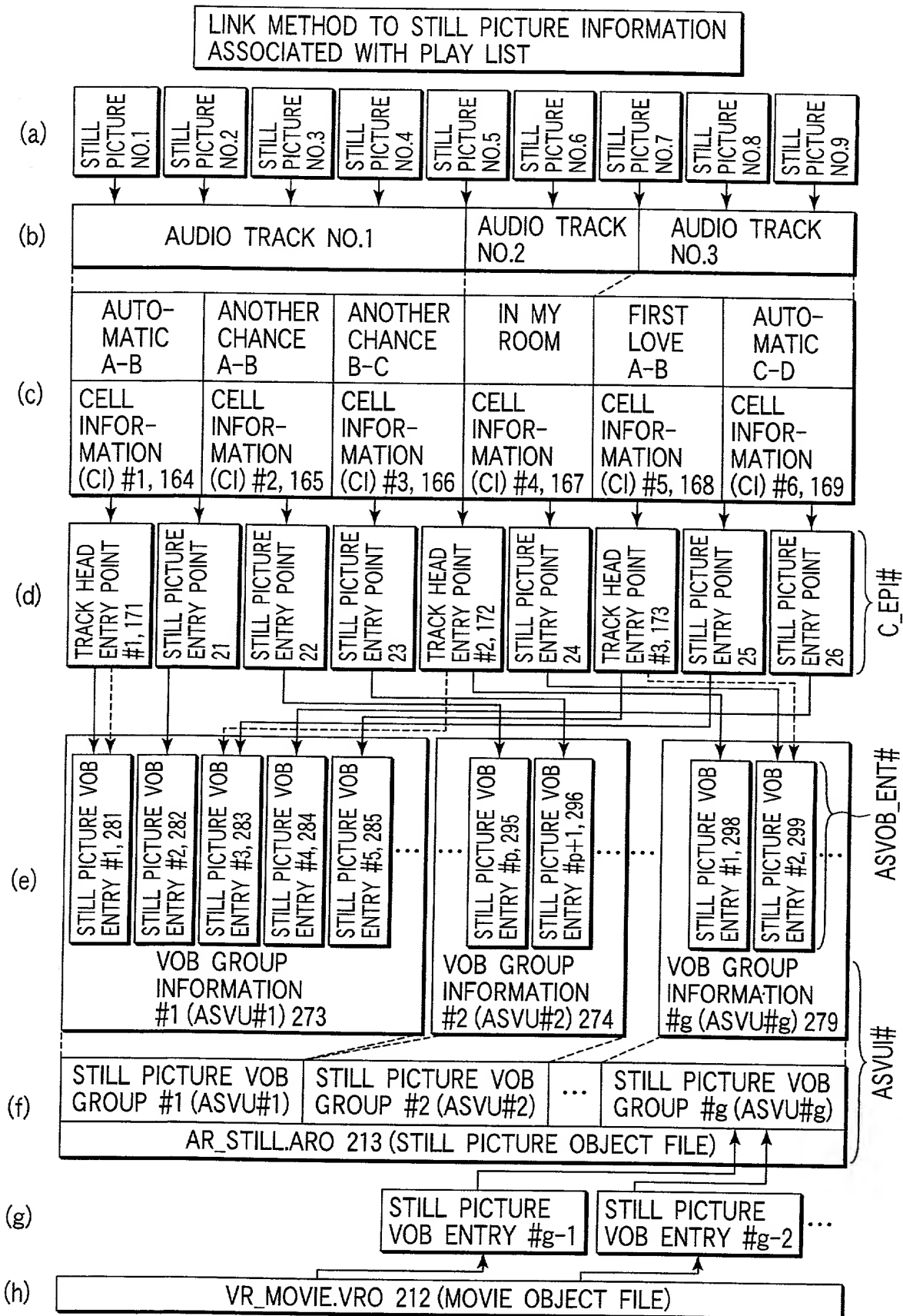


FIG. 10

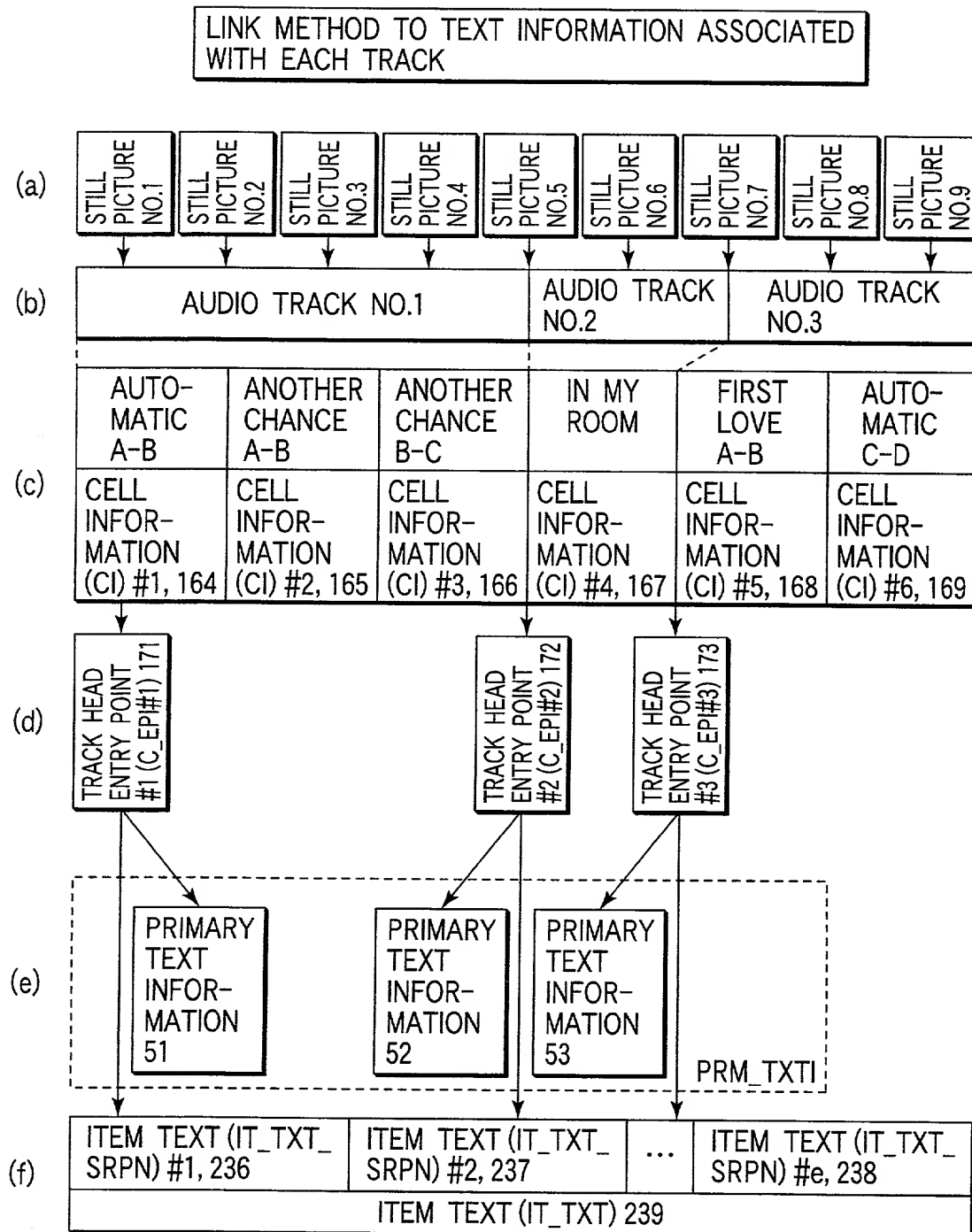


FIG. 11

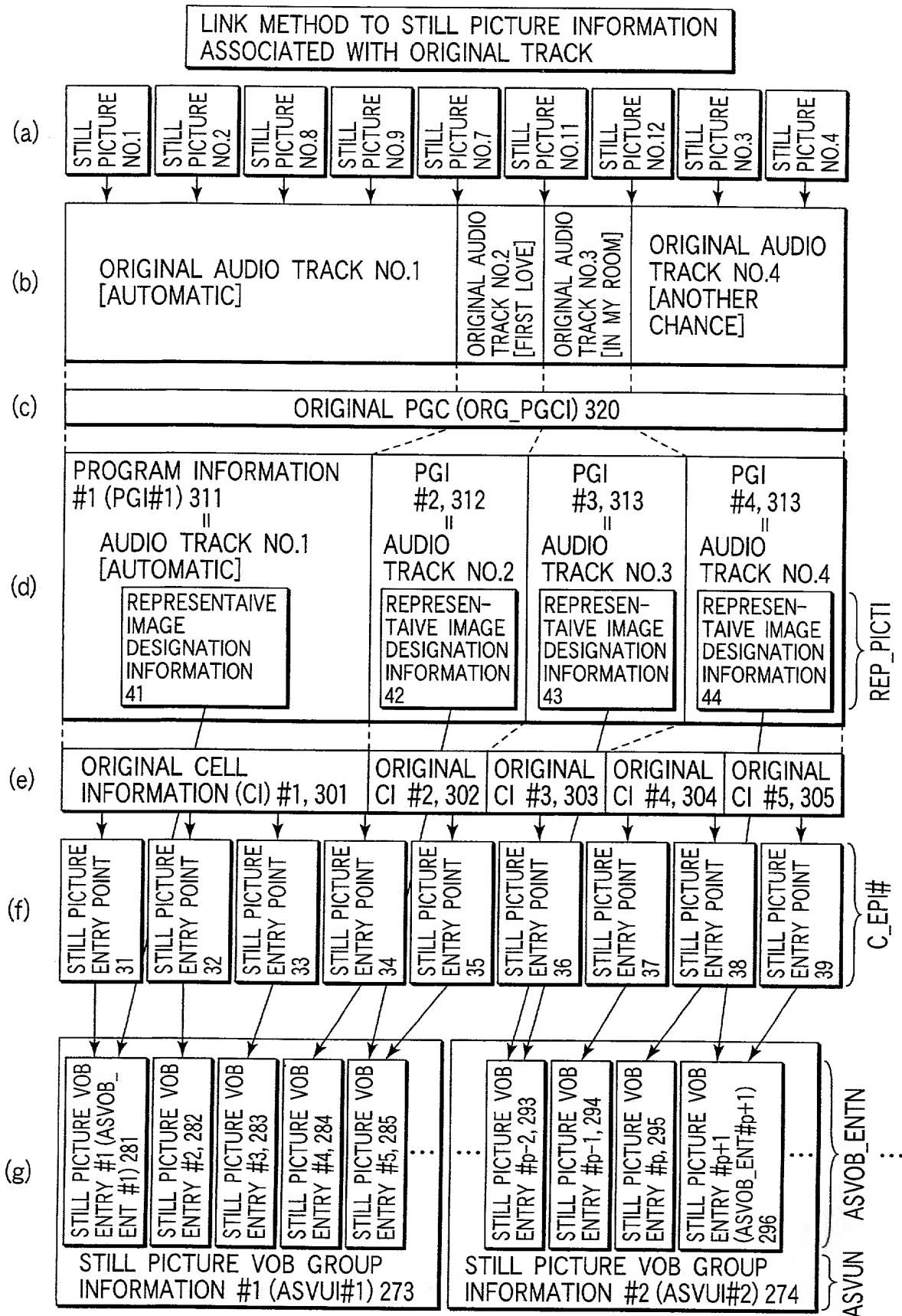


FIG. 12

LINK METHOD TO TEXT INFORMATION ASSOCIATED WITH ORIGINAL TRACK

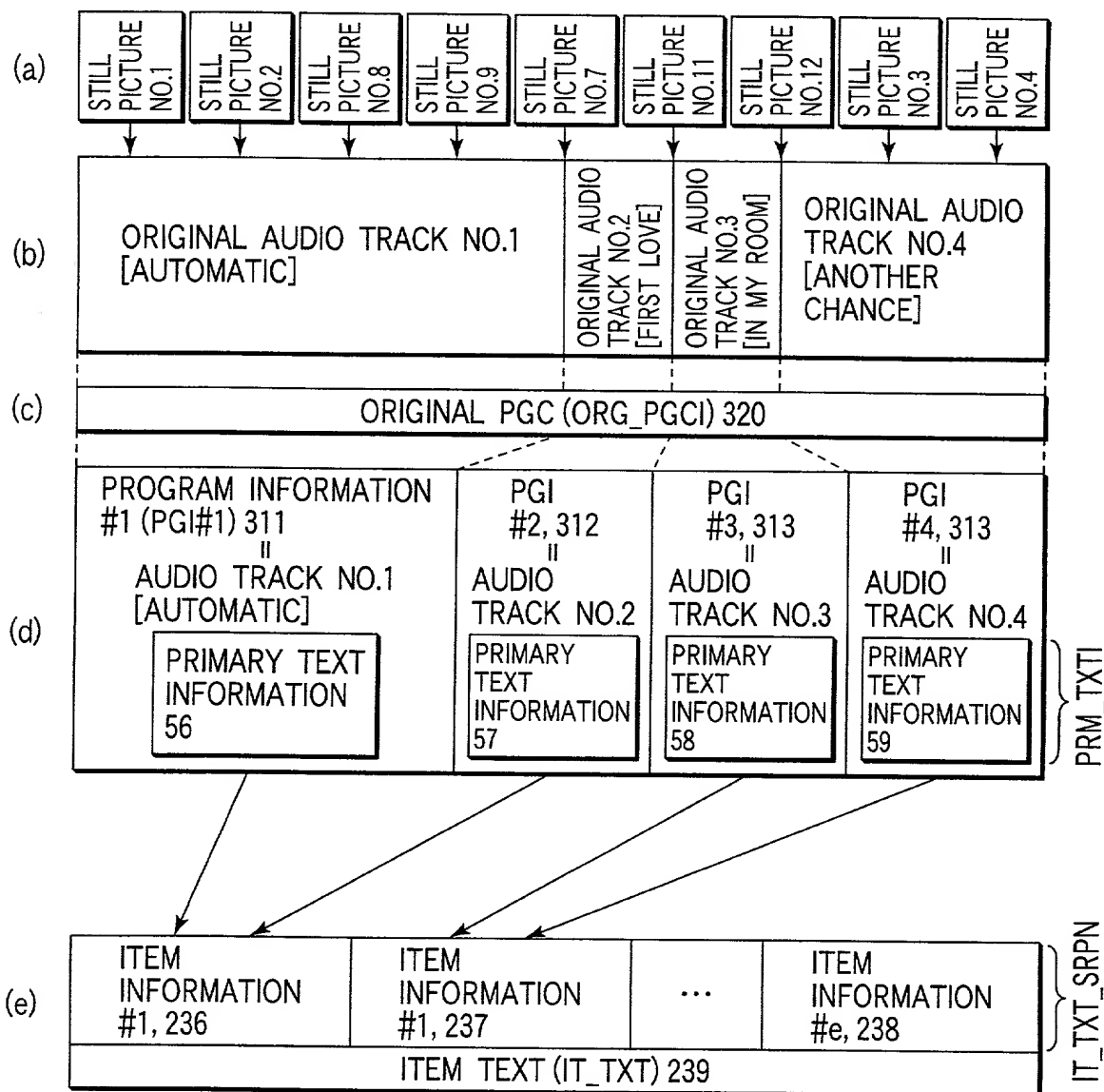


FIG. 13



FIG. 14

RECORDING METHOD OF AUDIO RELATED INFORMATION
ON INFORMATION STORAGE MEDIUM

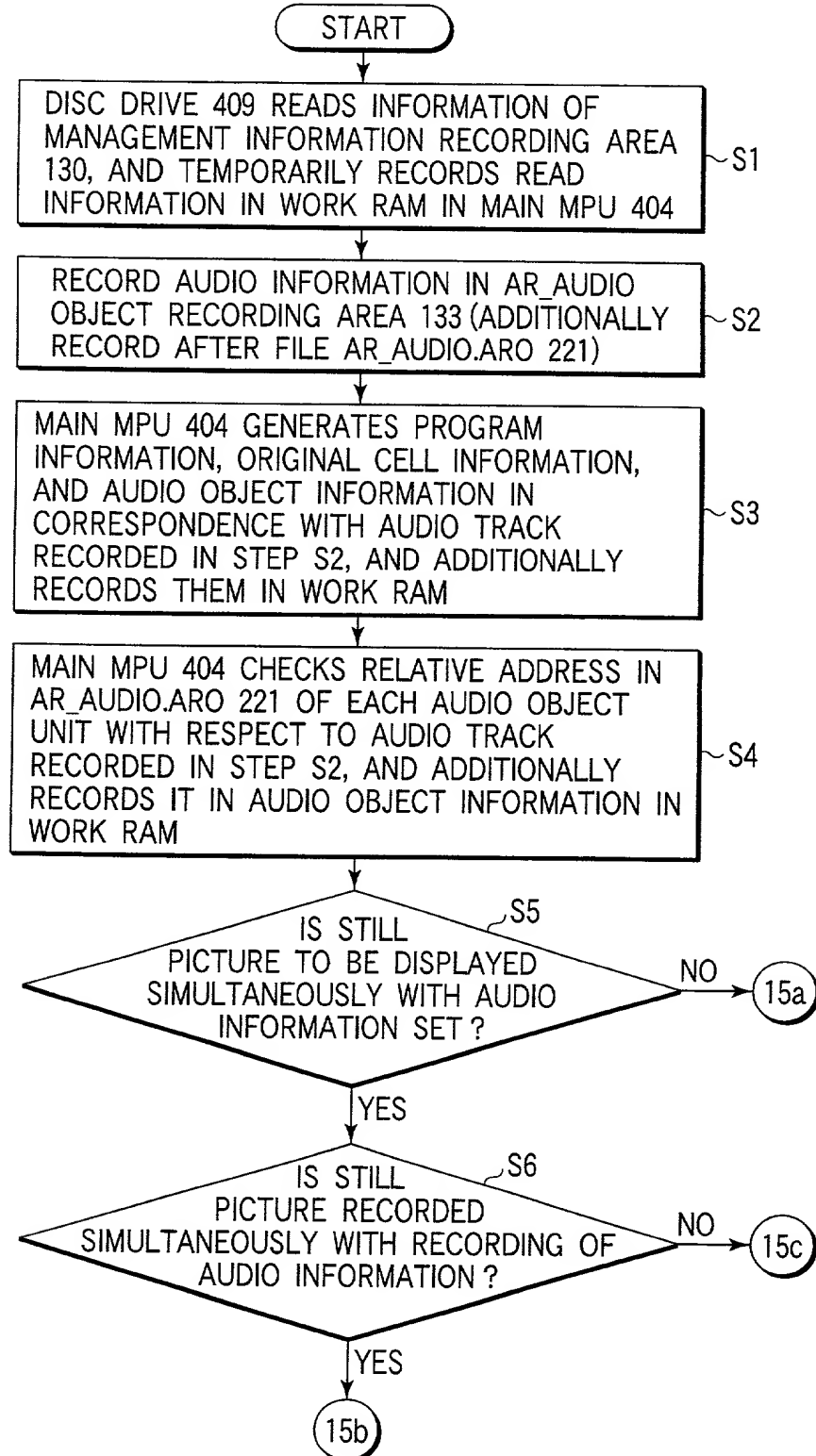


FIG. 15

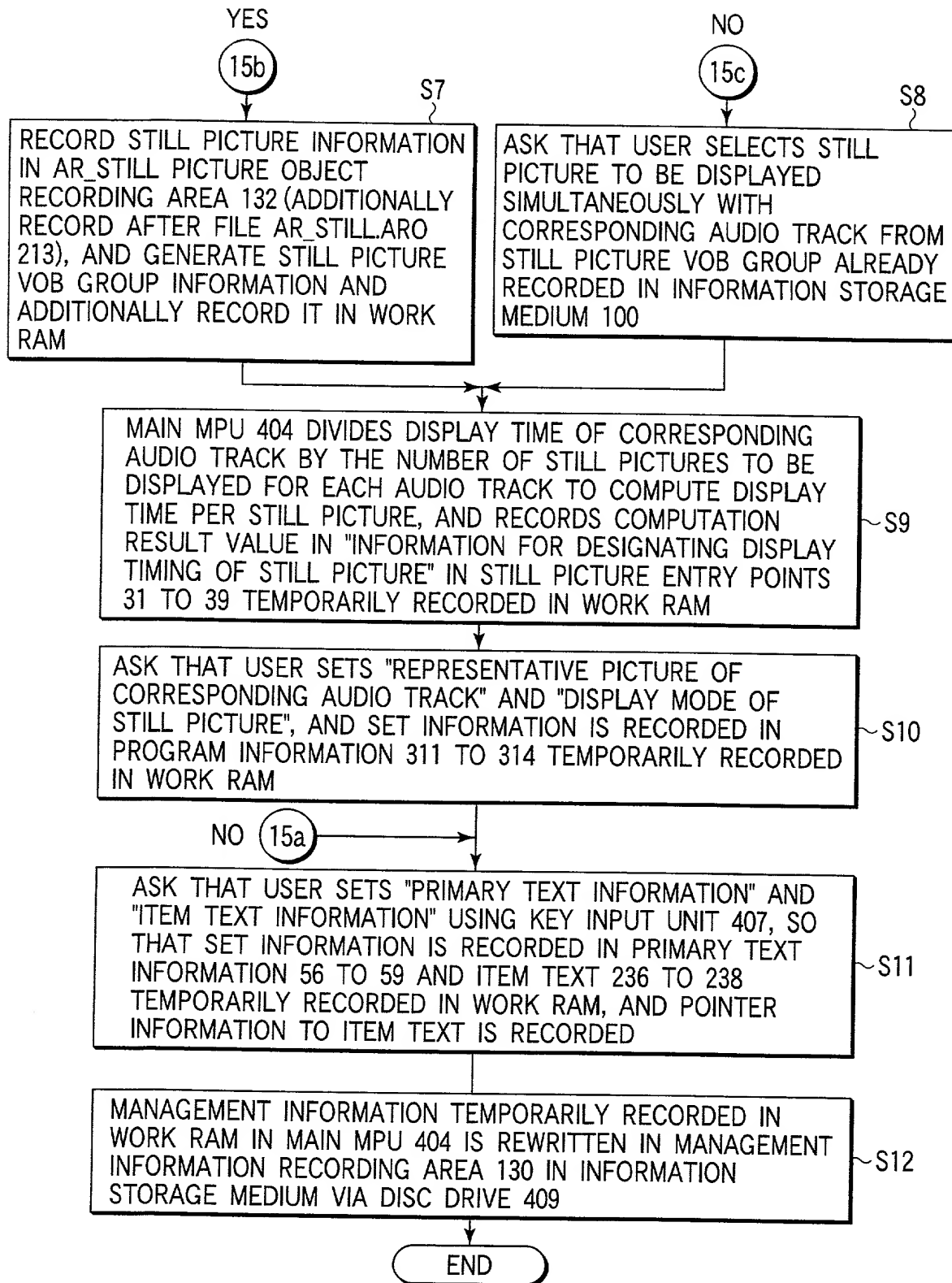


FIG. 16

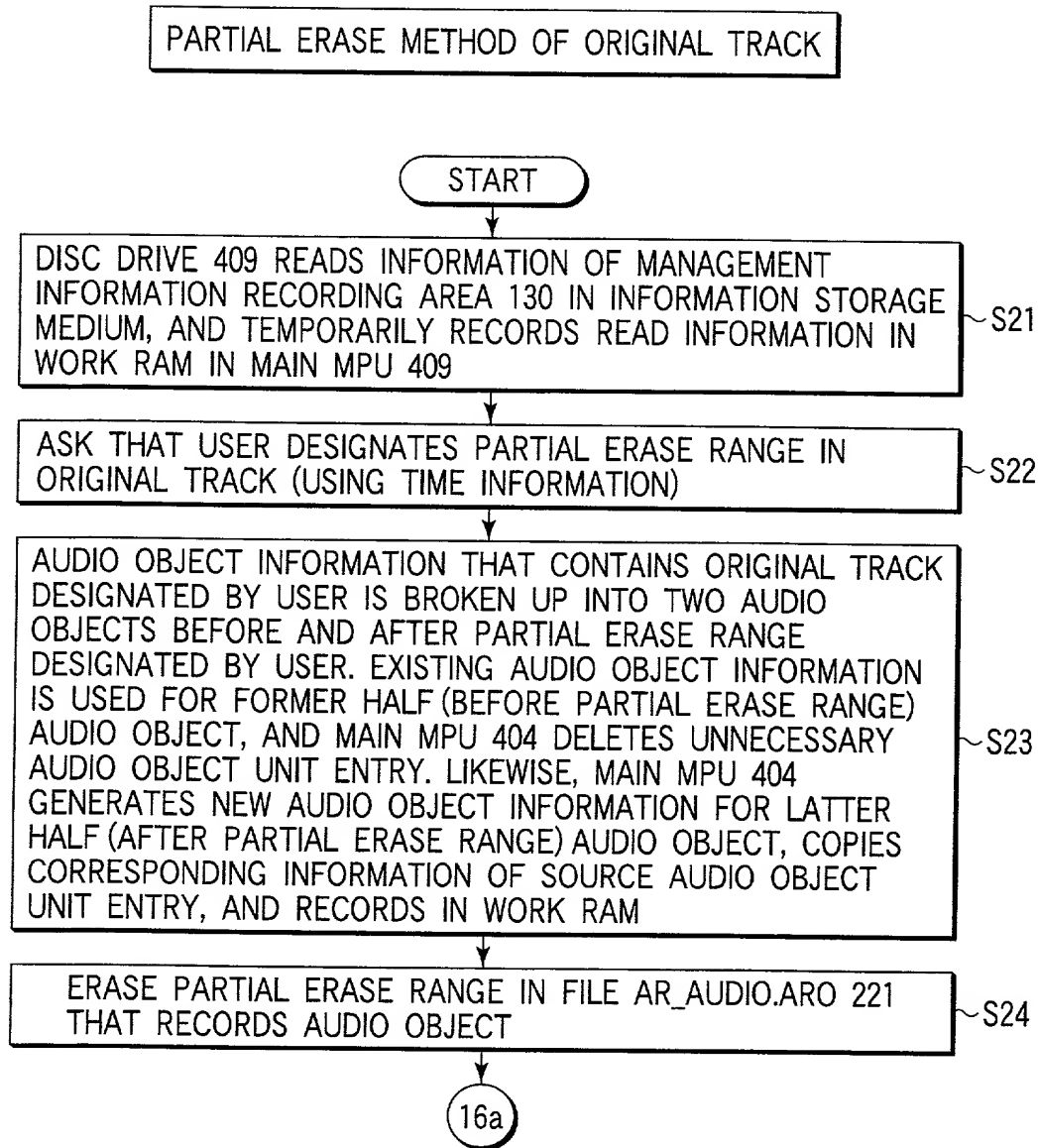


FIG. 17

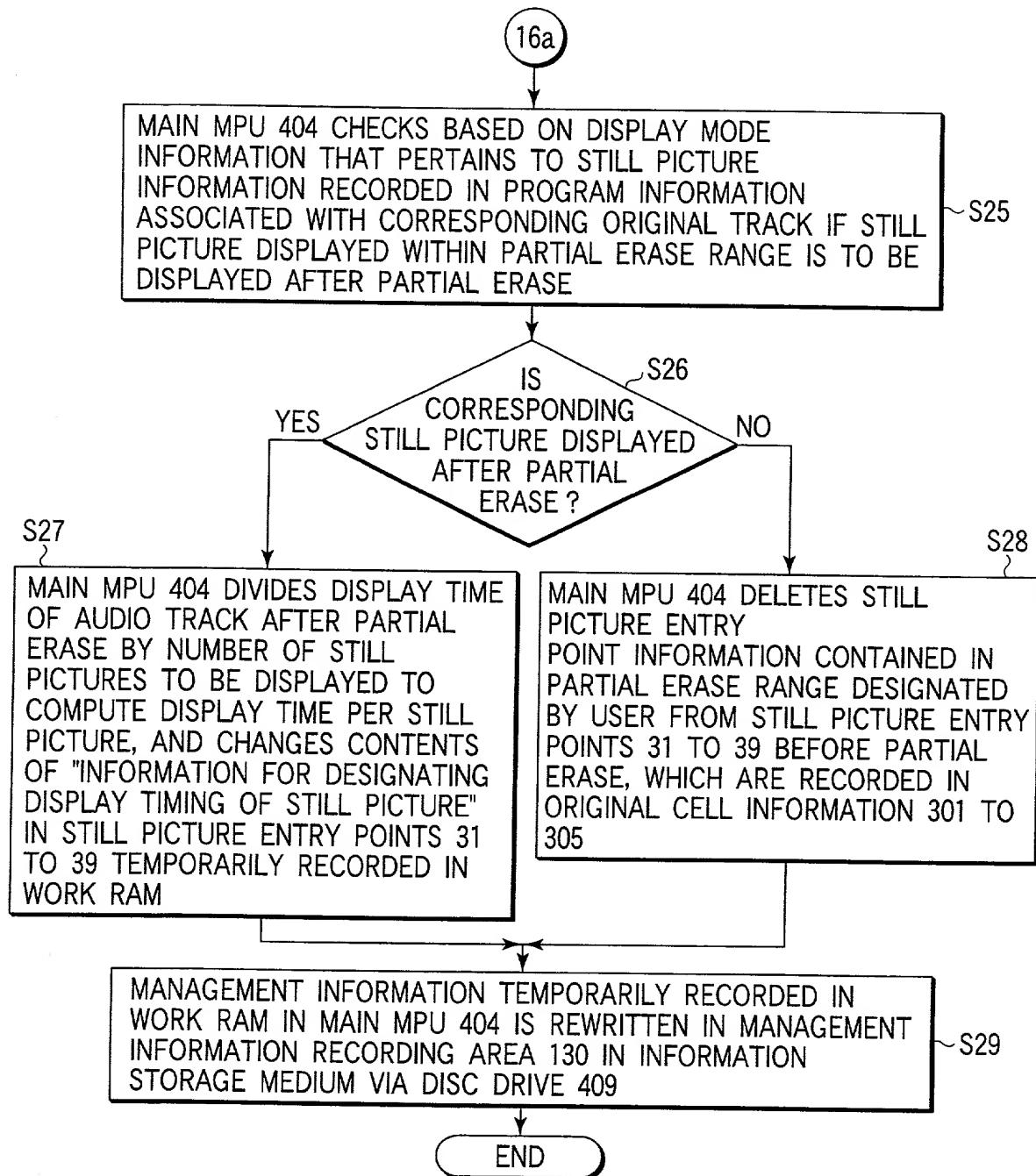


FIG. 18

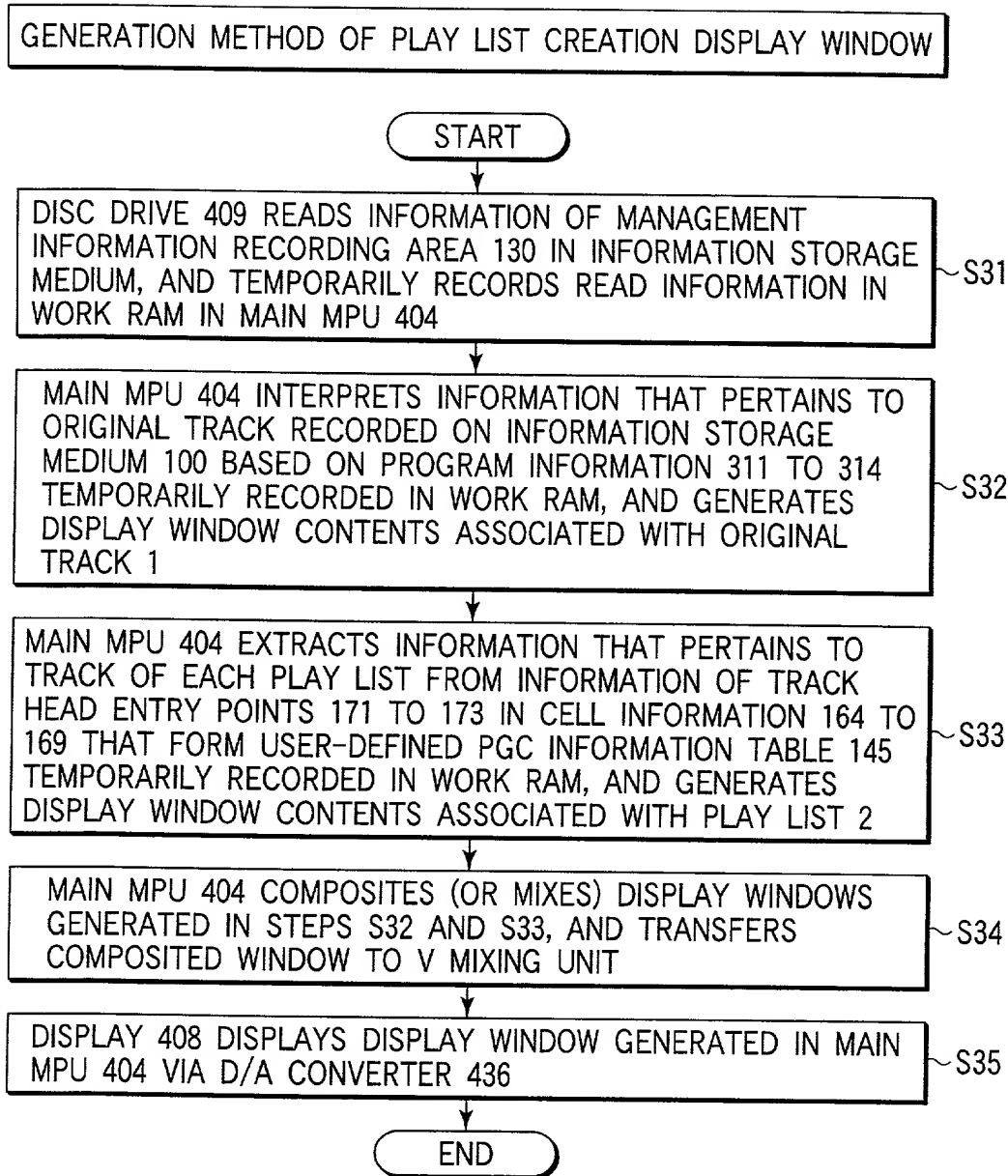


FIG. 19

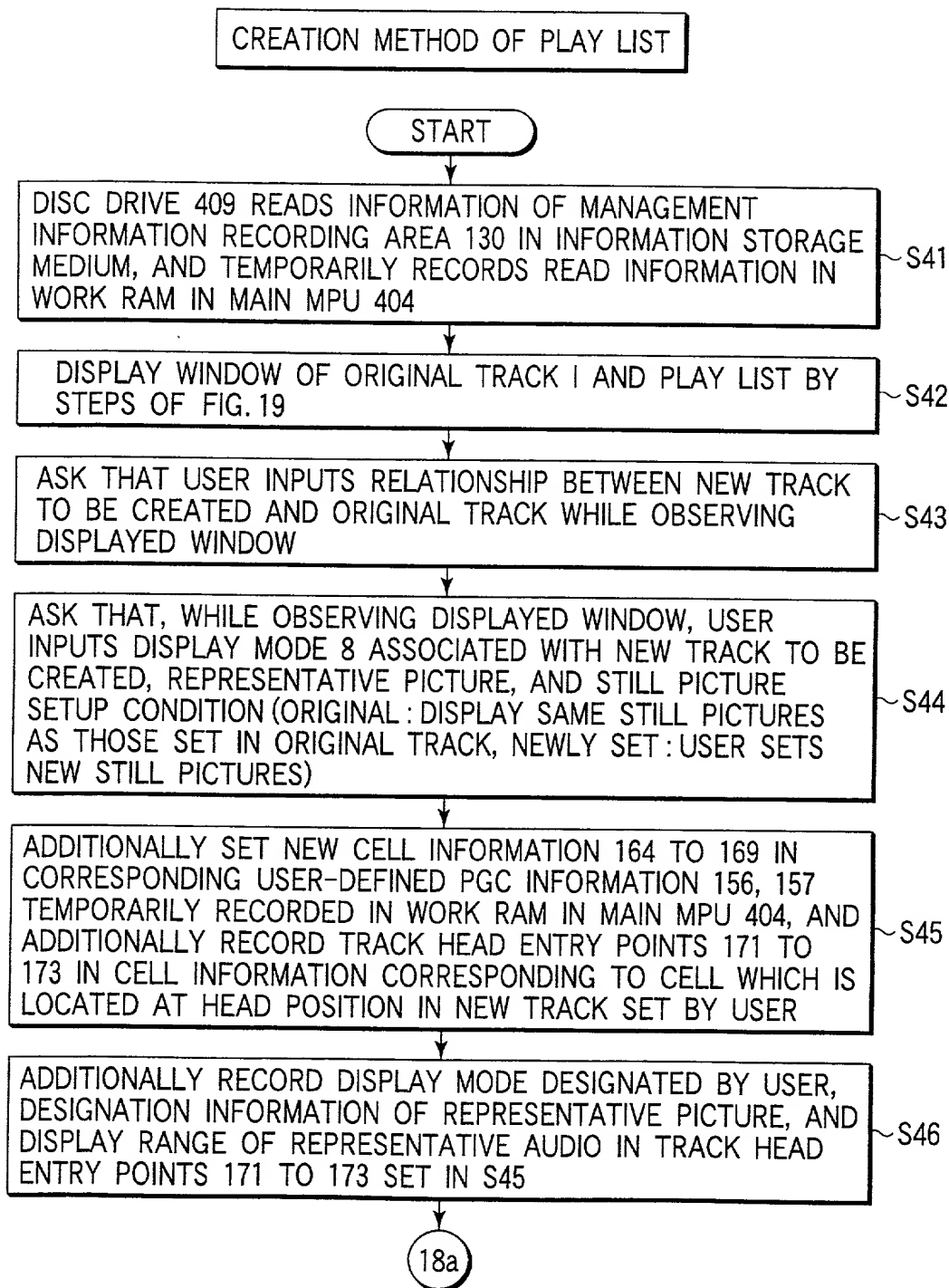


FIG. 20

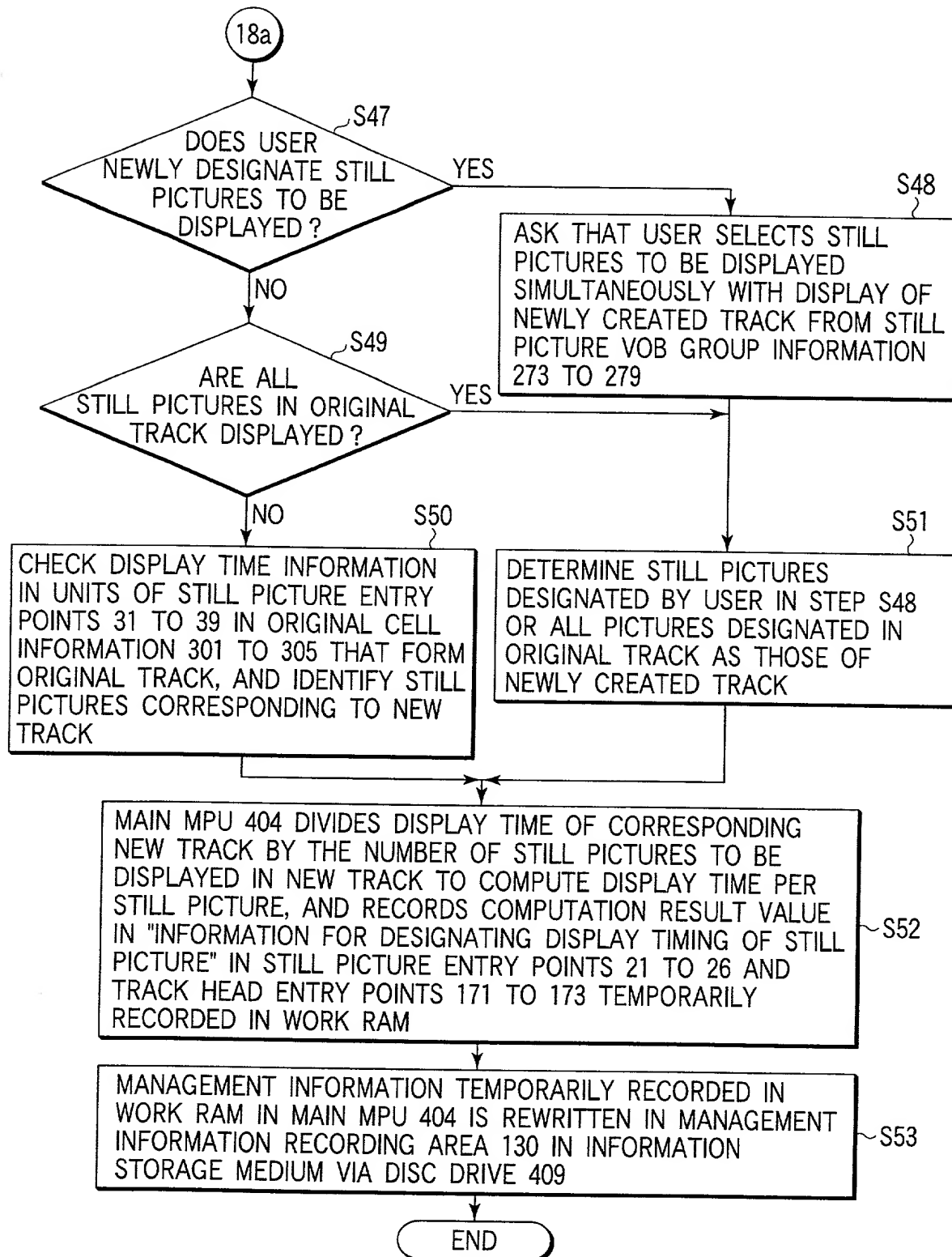


FIG. 21

METHOD OF USING VIDEO INFORMATION AS STILL PICTURE INFORMATION
TO BE DISPLAYED SIMULTANEOUSLY WITH AUDIO INFORMATION

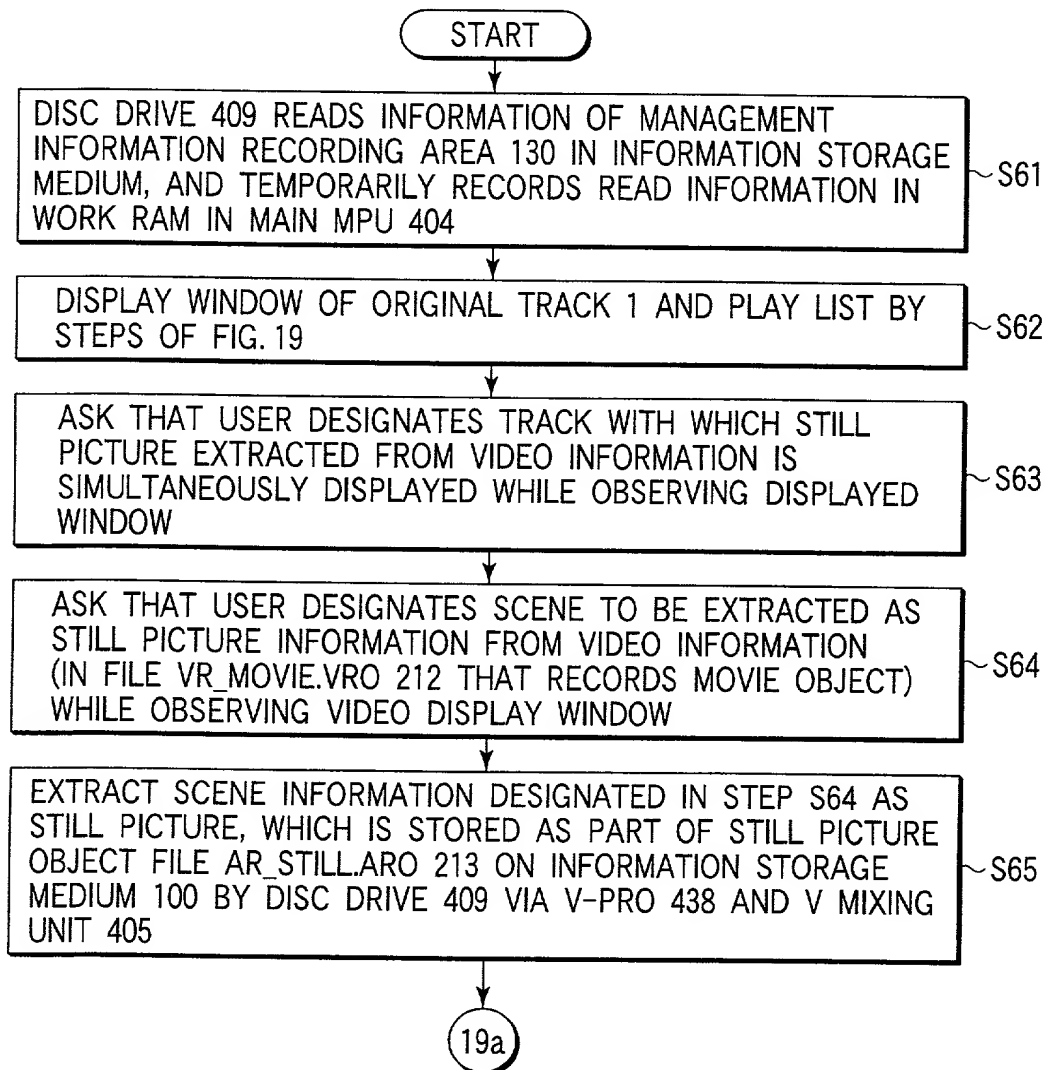


FIG. 22

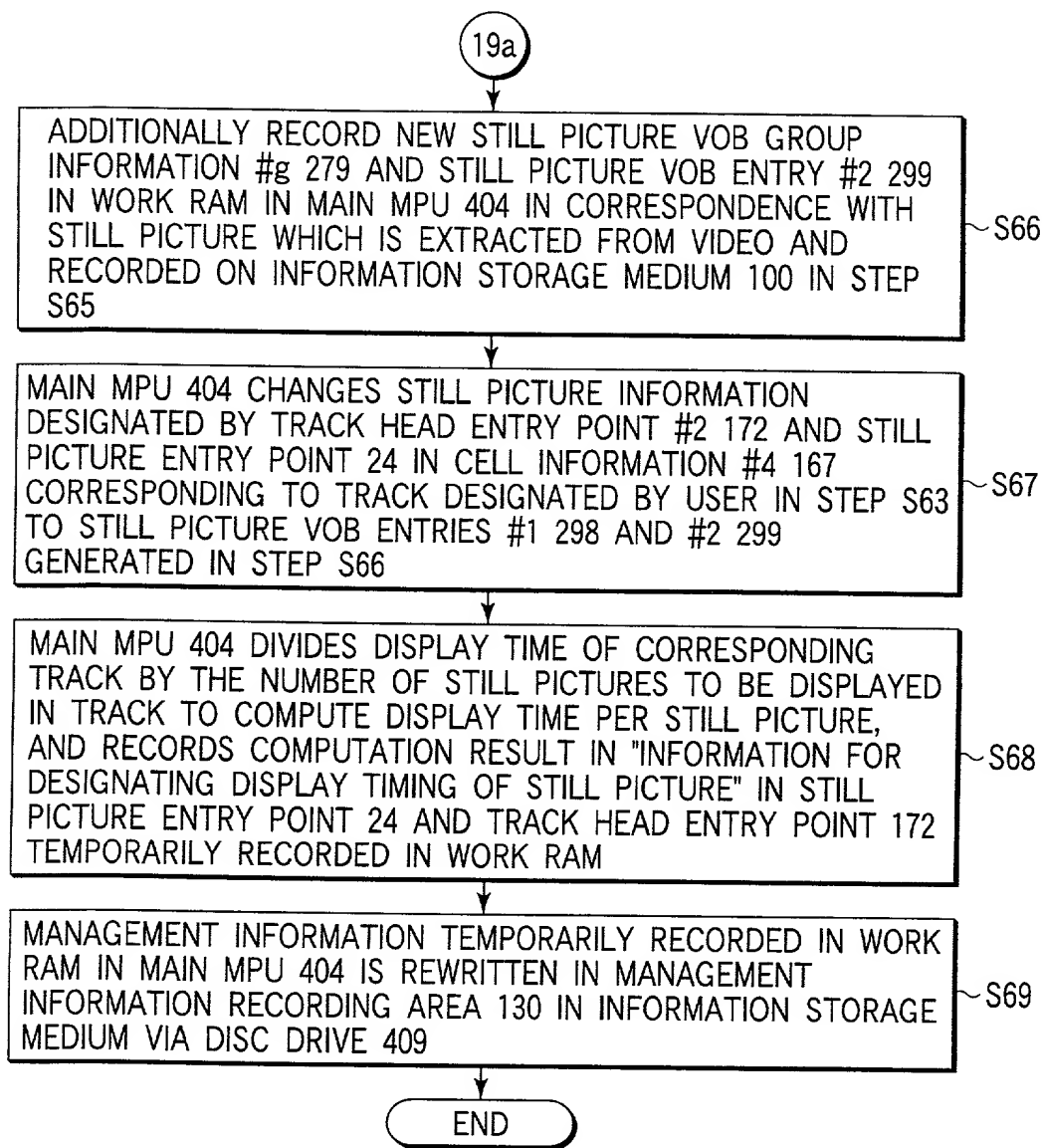


FIG. 23

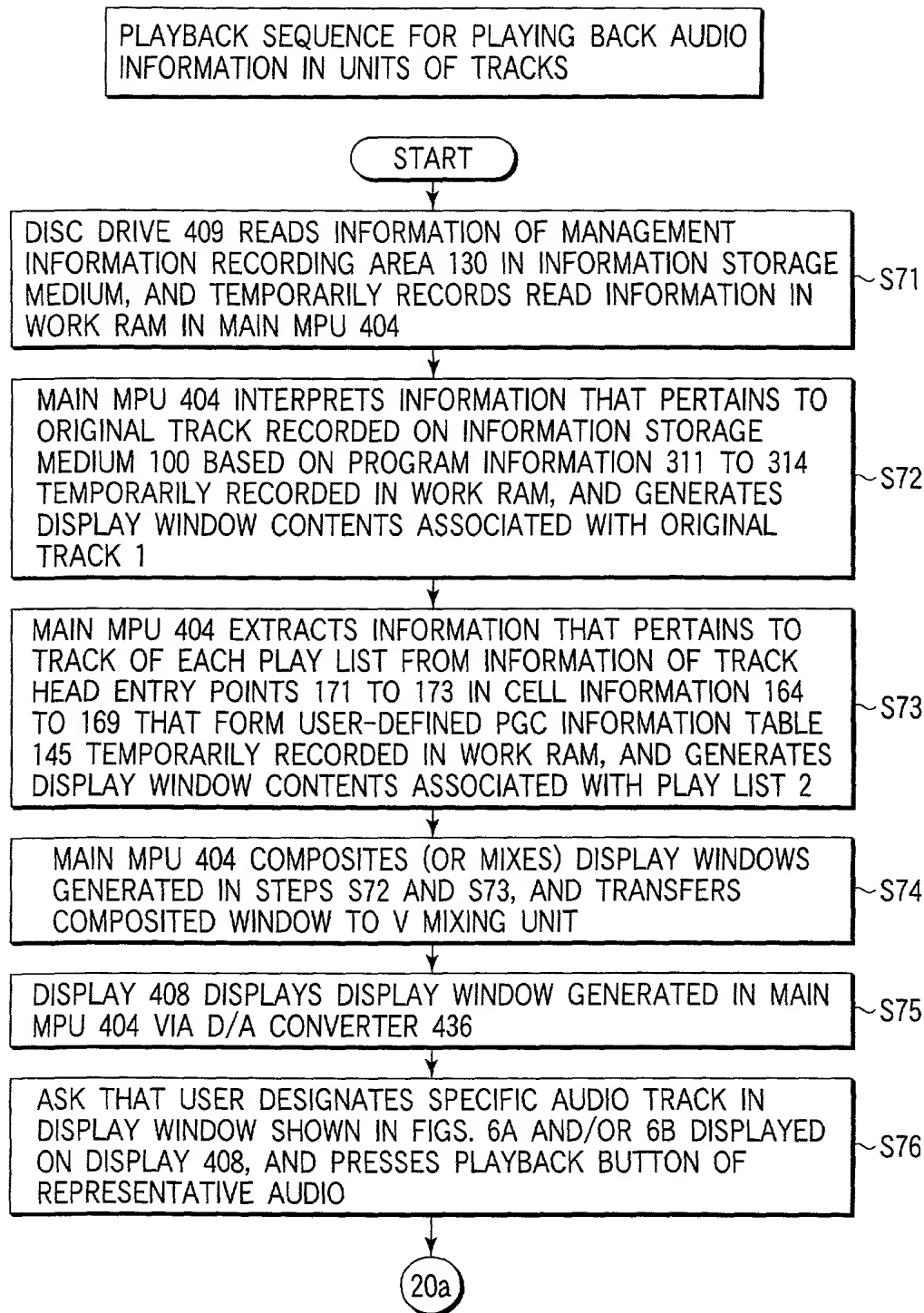


FIG. 24

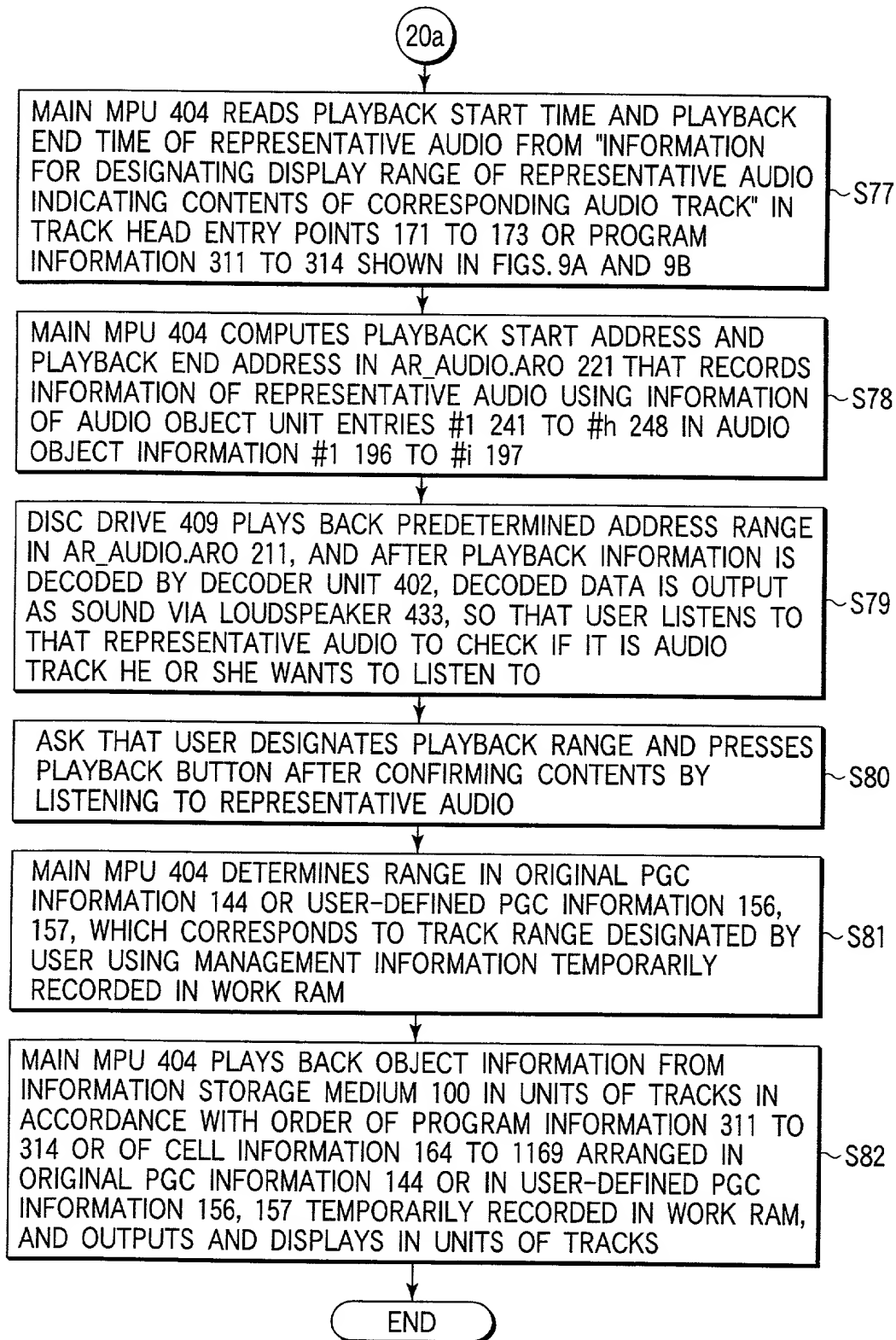


FIG. 25

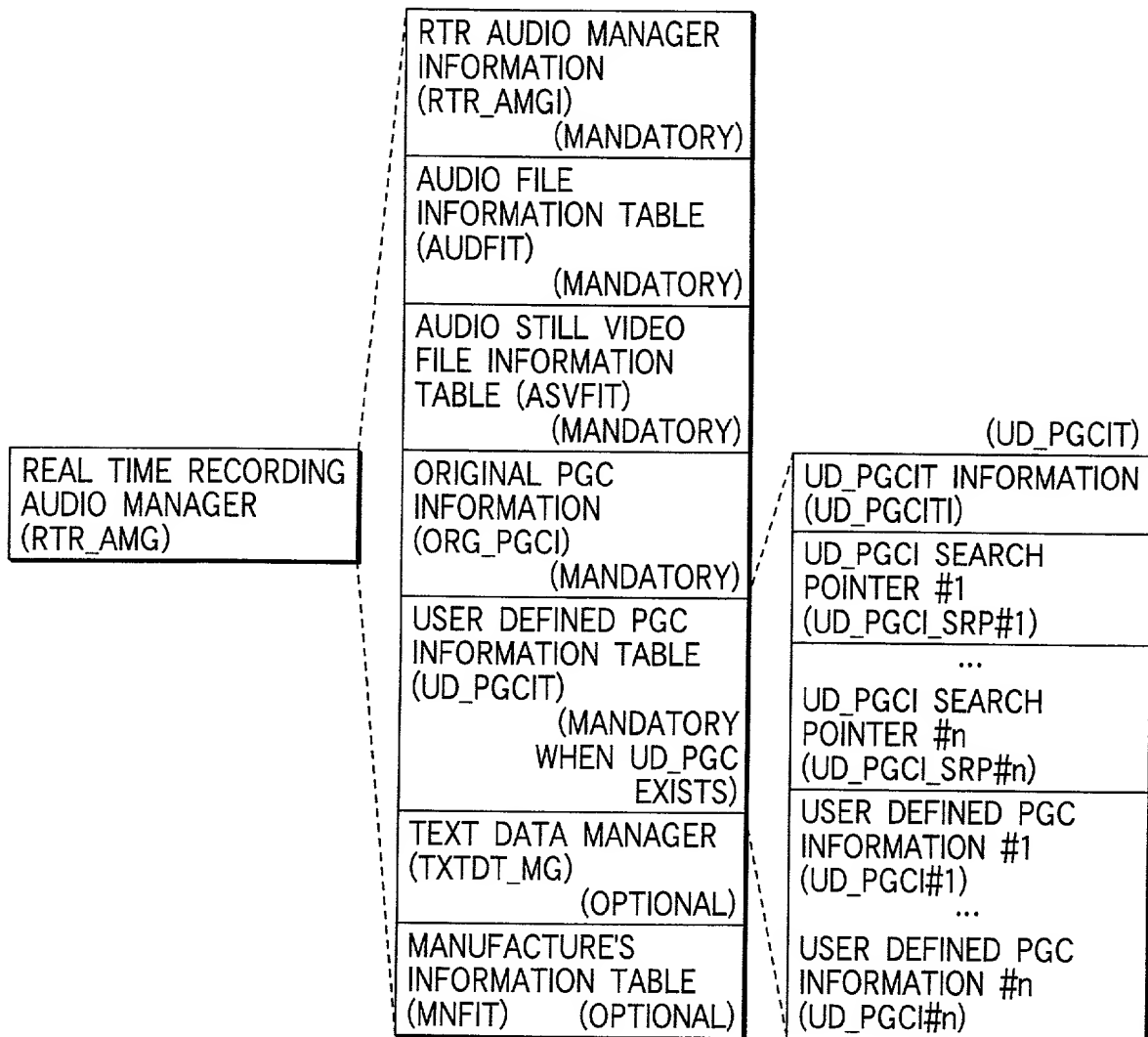


FIG. 26

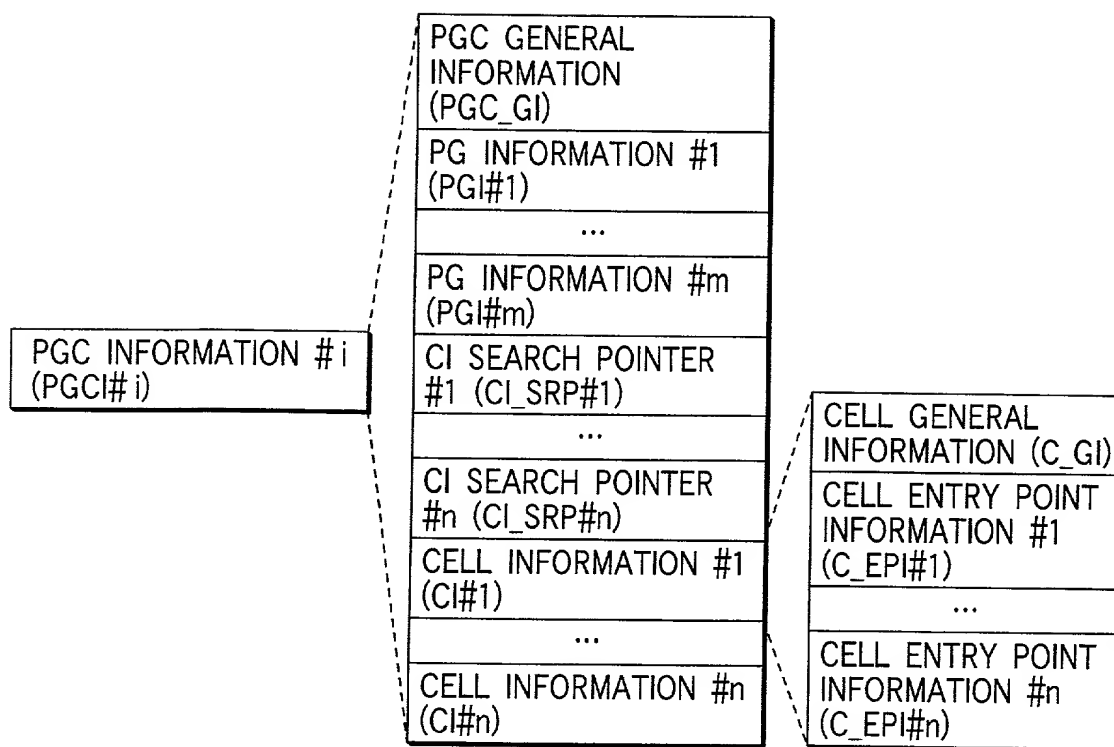


FIG. 27

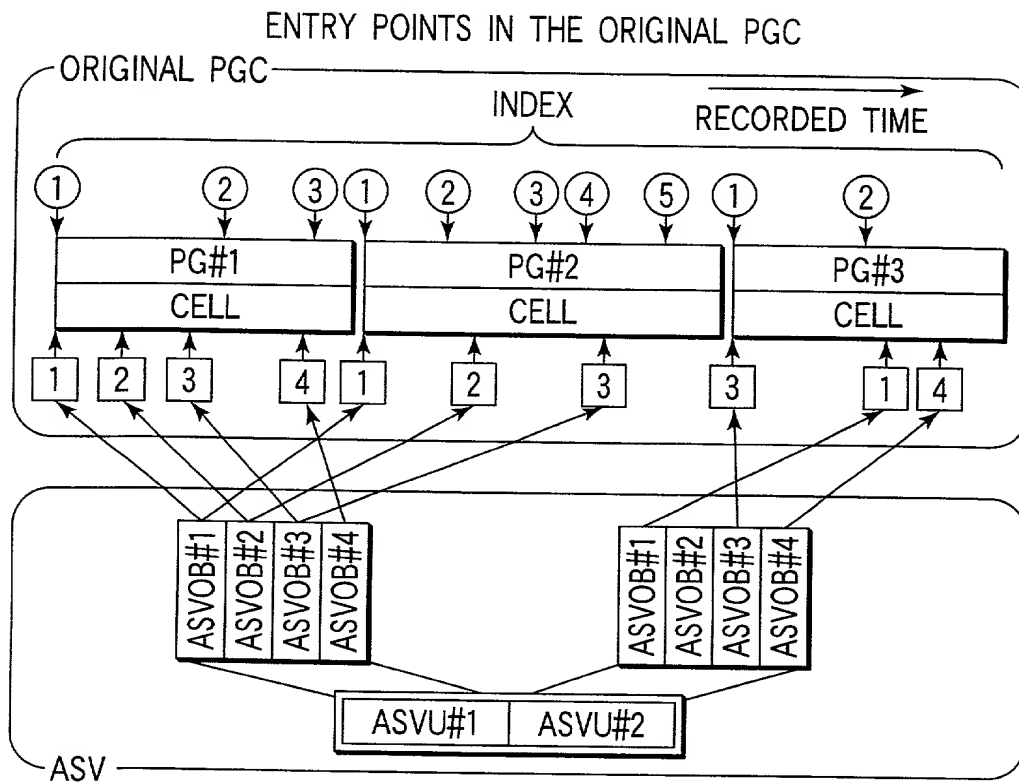


FIG. 28A

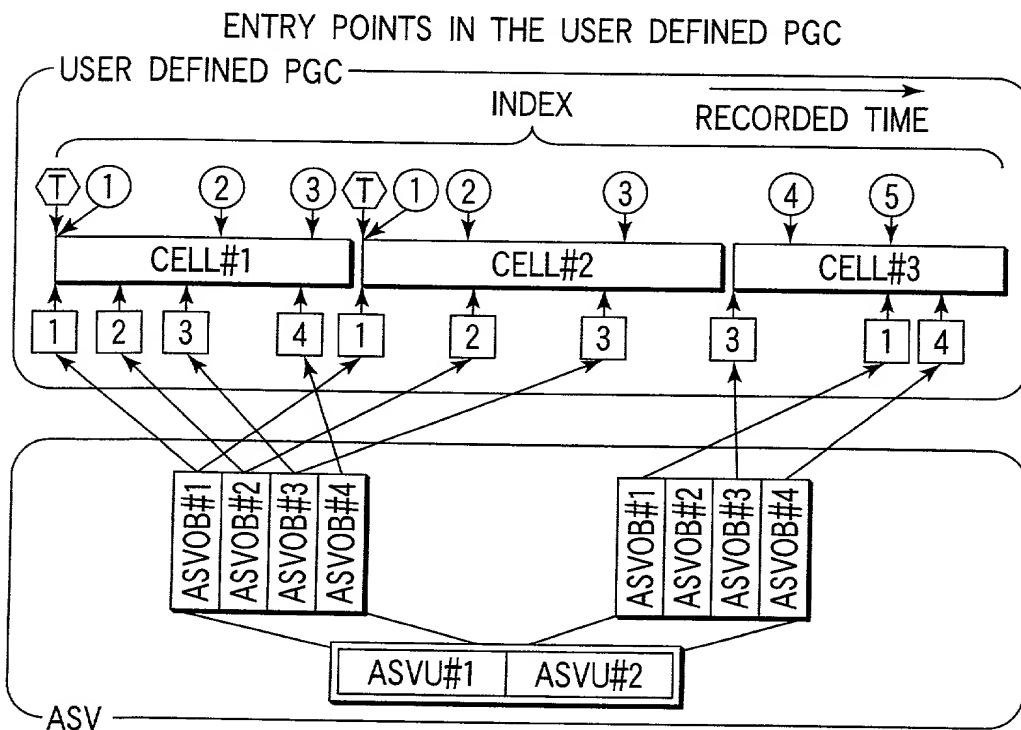


FIG. 28B

C_EPI (TYPE A1)

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	EP_TY	ENTRY POINT TYPE	1BYTE
1 TO 6	EP_PTM	PTM OF ENTRY POINTS	6BYTES
7 TO 134	PRM_TXT	PRIMARY TEXT INFORMATION	128BYTES
135 TO 136	IT_TXT_SRPN	IT_TXT SEARCH POINTER INFORMATION	2BYTES
137 TO 139	REP_PICTI	REPRESENTATIVE PICTURE INFORMATION	3BYTES
TOTAL			140BYTES

(RBP 0) EP_TY

DESCRIBES EP TYPE OF THIS ENTRY POINT

b7	b6	b5	b4	b3	b2	b1	b0
EP_TY1		EP_TY2		RESERVED			

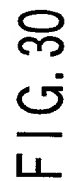
EP_TY1 ... '01b' SHALL BE DESCRIBED FOR TYPE A1 ENTRY POINT

EP_TY2 ... '00b' SHALL BE DESCRIBED FOR TYPE A1 ENTRY POINT

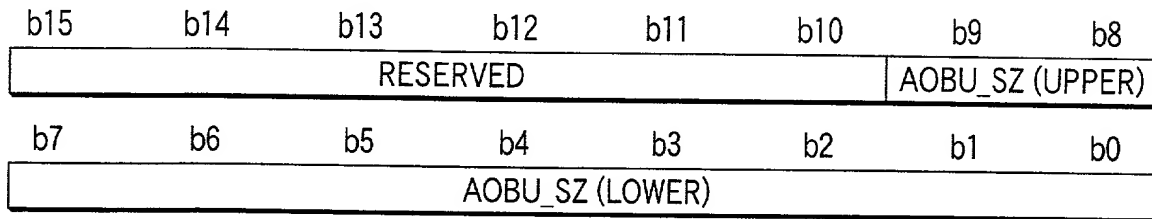
EP_PTM

ALL BYTES SHALL BE SET TO '00h'

FIG. 29



AOBU ENTRY (AOBU_ENT)



AOBU_SZ ... DESCRIBES THE SIZE OF THIS AOB. THE SIZE IS SPECIFIED BY THE NUMBER OF PACKS IN THIS AOB

FIG. 31

[CONCEPT OF AOBU ACCESSES]

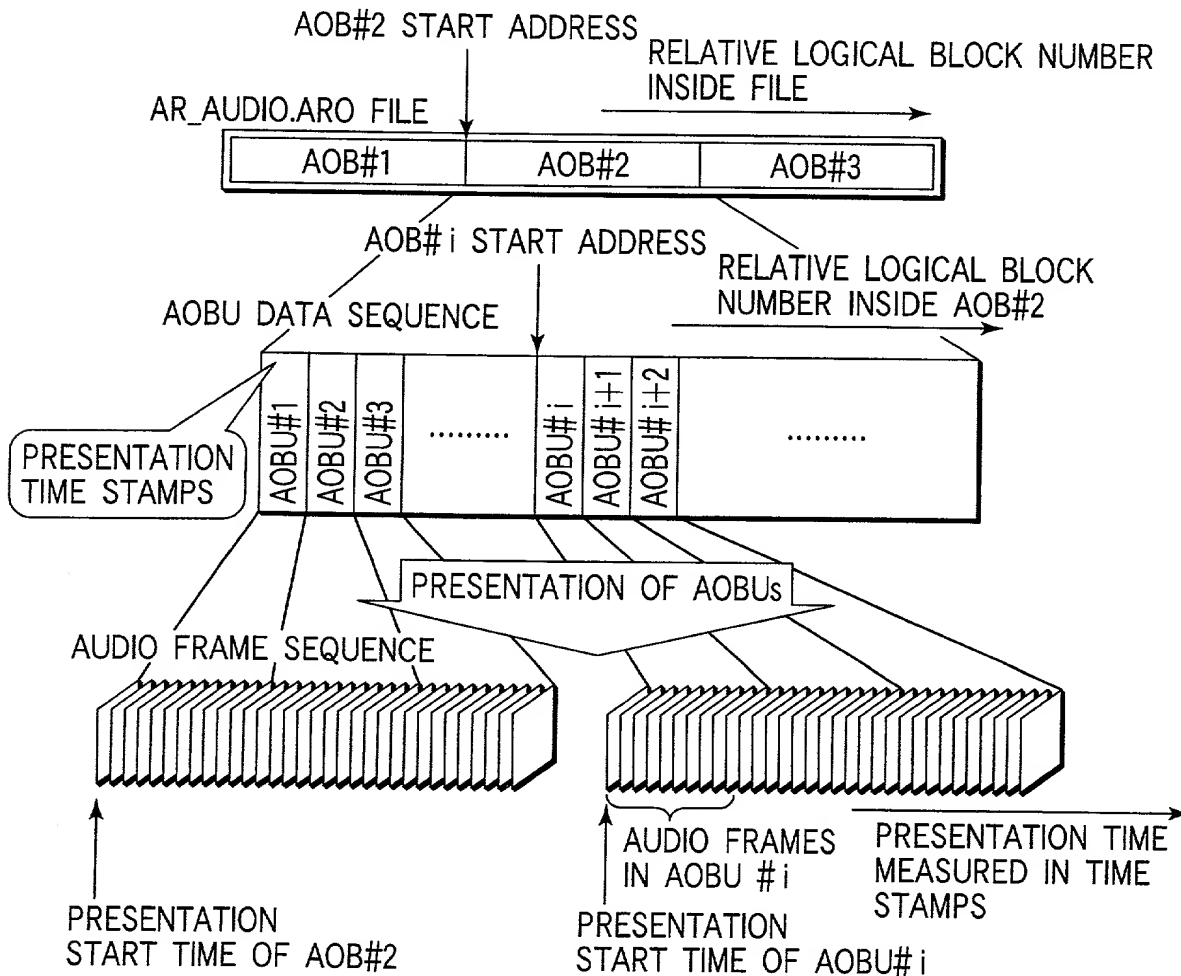


FIG. 32

[CONCEPT OF AOBU ENTRIES]

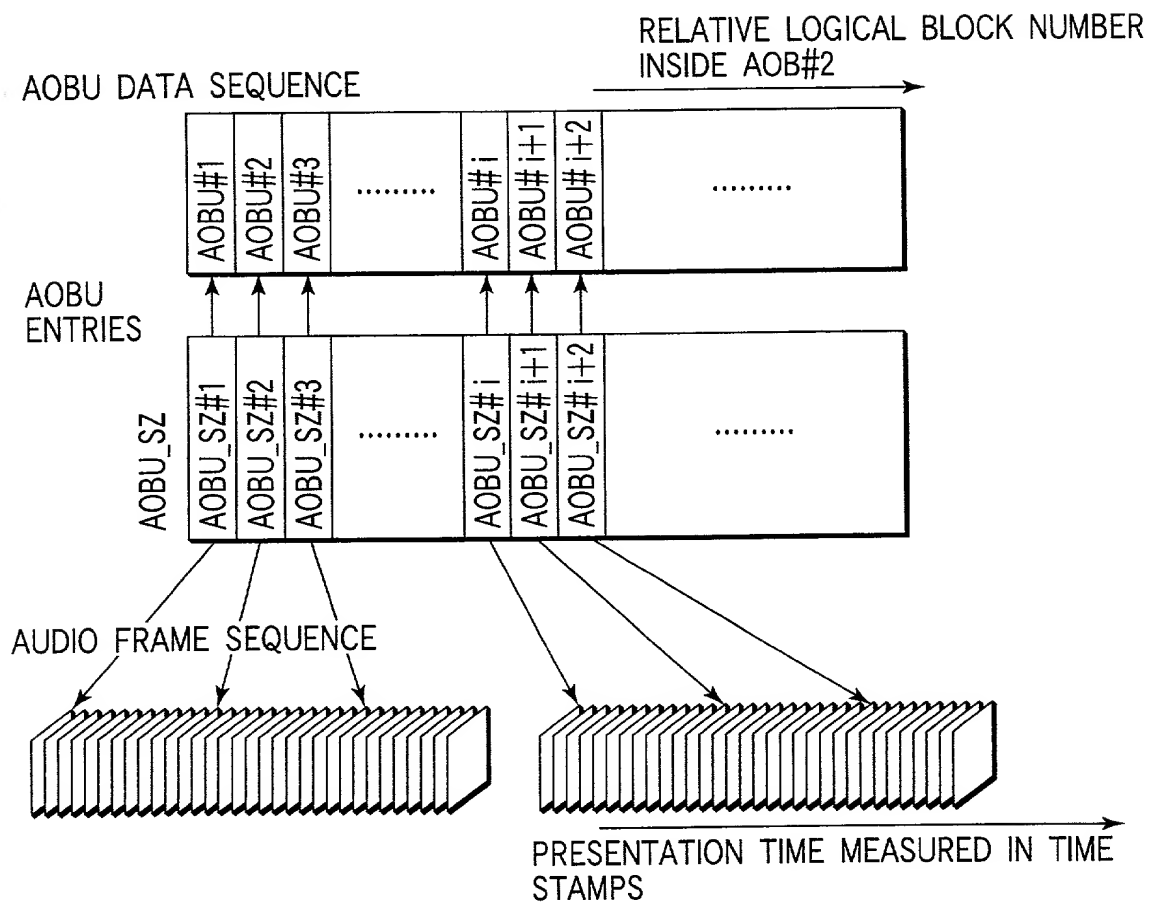


FIG. 33

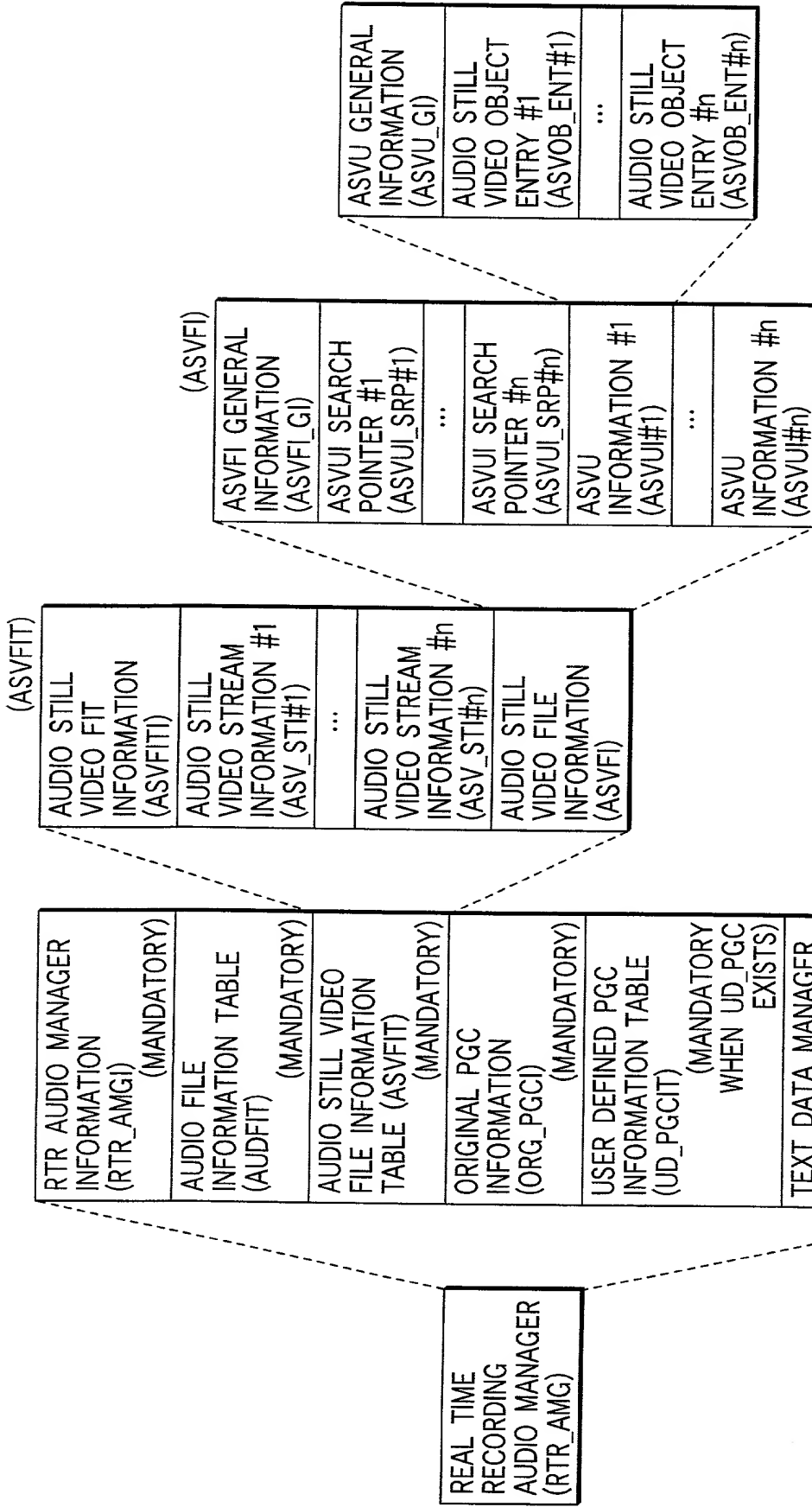


FIG. 34

ASVOB_ENT

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	ASVOB_ENT_TY	ASVOB ENTRY TYPE	1BYTE
1	ASVOB_SZ	SIZE OF ASVOB	1BYTE
TOTAL			2BYTES

ASVOB_ENT_TY

DESCRIBES TE IN THE FOLLOWING FORMAT

b15	b14	b13	b12	b11	b10	b9	b8
RESERVED		TE	RESERVED				

TE ... 00b : THIS ASVOB IS IN NORMAL STATE

01b : THIS ASVOB IS IN TEMPORARILY ERASED STATE

ASVOB_SZ

DESCRIBES THE SIZE OF ASVOB IN LBs (LOGICAL BLOCKS)

FIG. 35

[STRUCTURE OF THE ASVOB]

AR_STILL.RO FILE

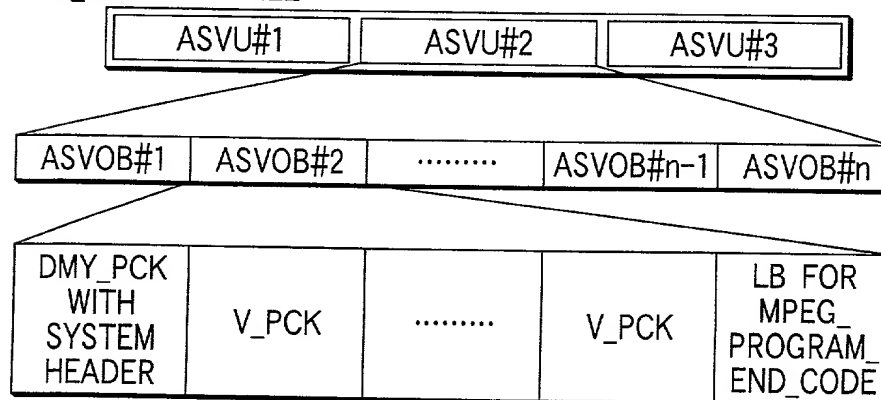


FIG. 36

[CONCEPT OF ASVOB ACCESS]

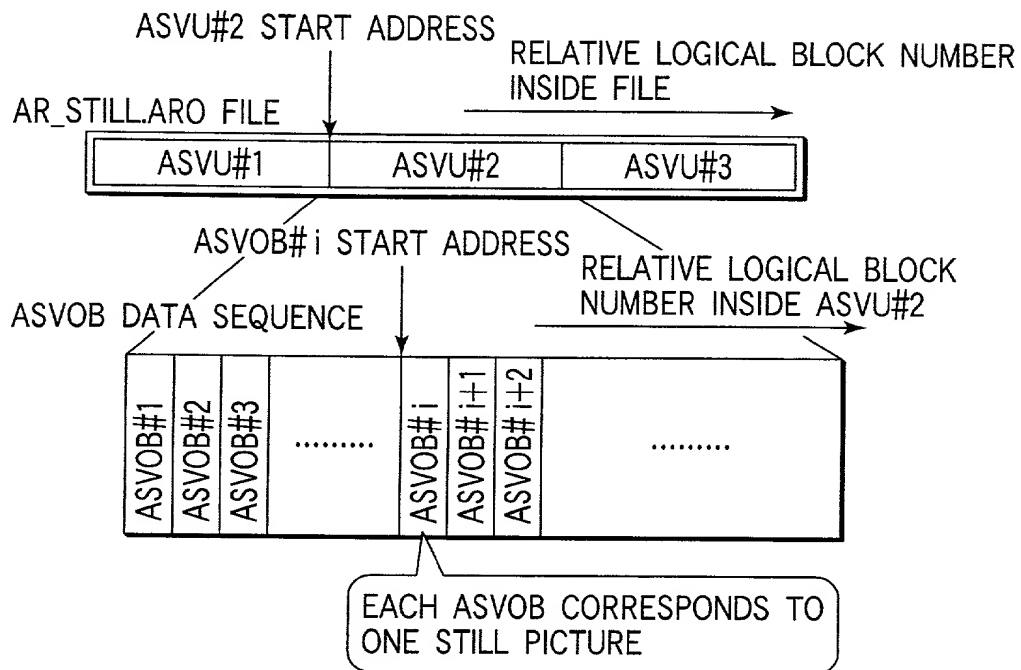


FIG. 37

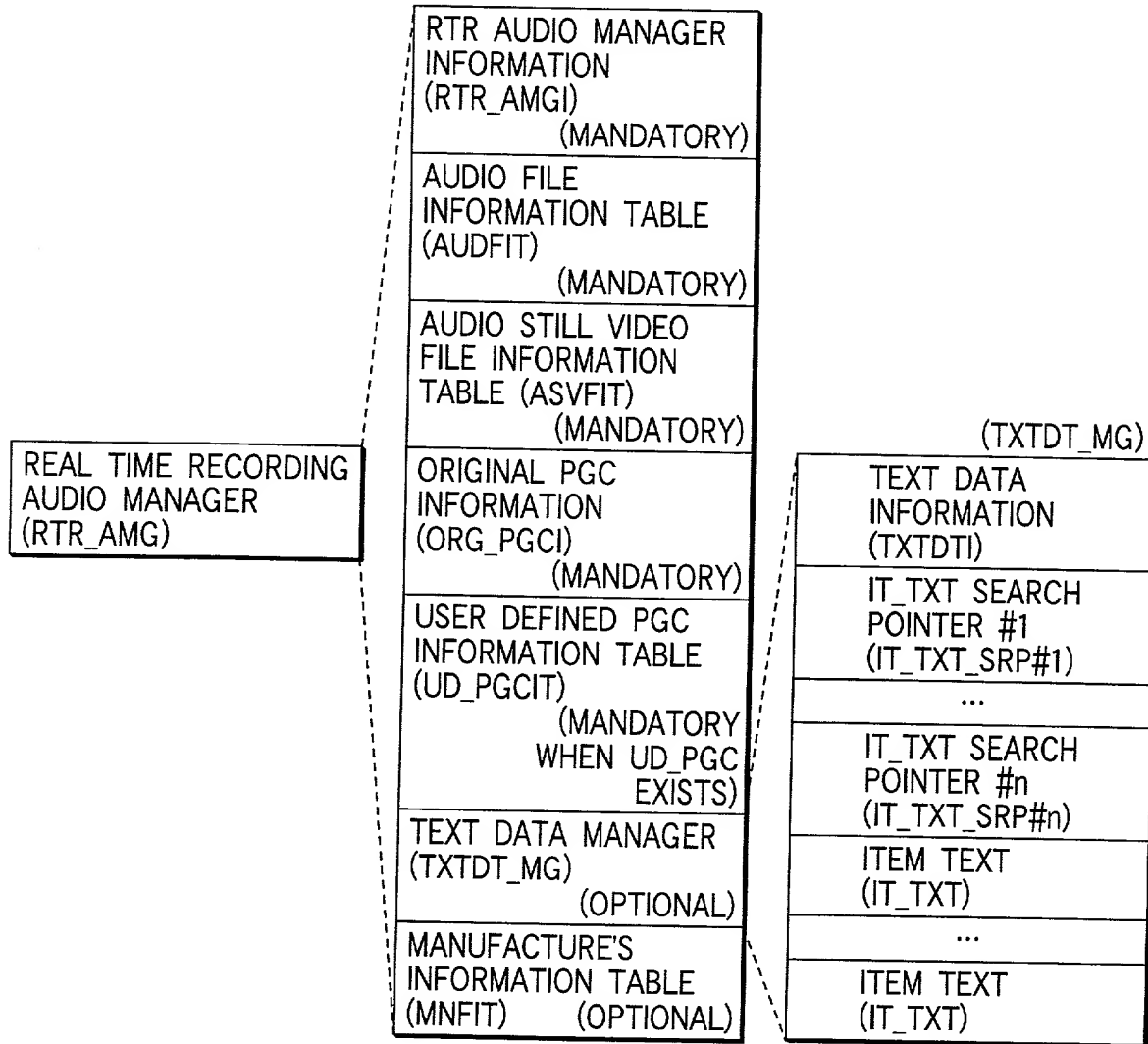


FIG. 38

AN EXAMPLE OF USAGE OF PRIMARY TEXT INFORMATION

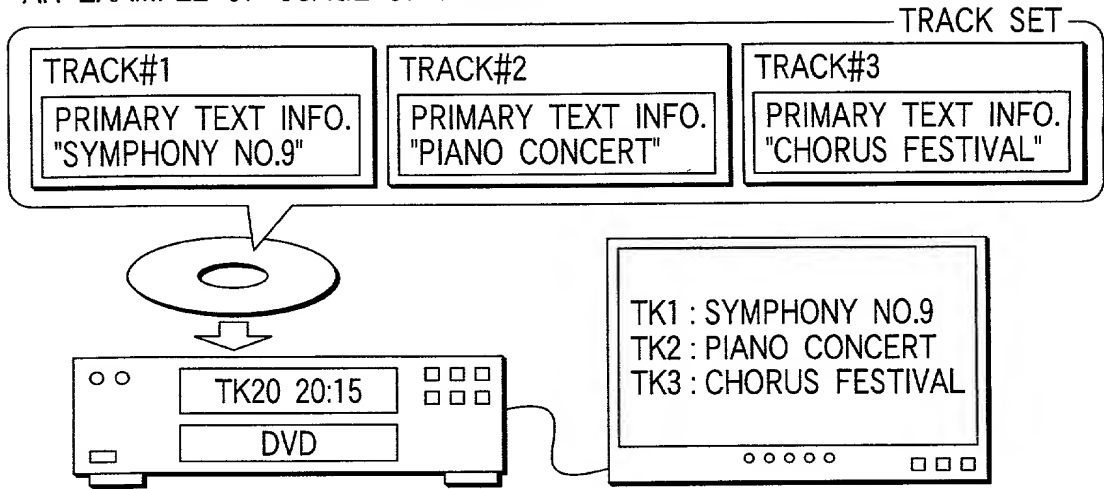


FIG. 39

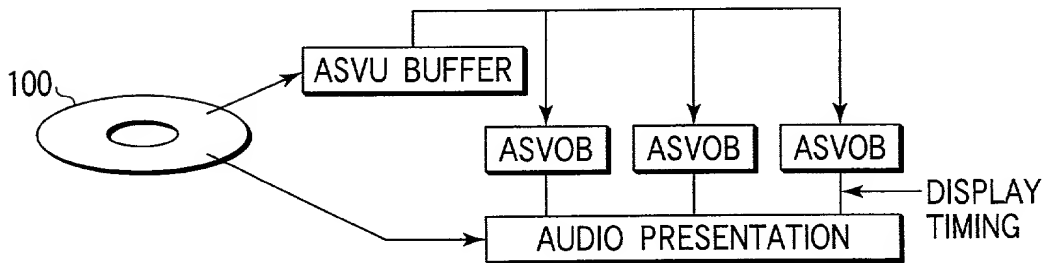


FIG. 40

AN EXAMPLE OF ORIGINAL
PGC STRUCTURE

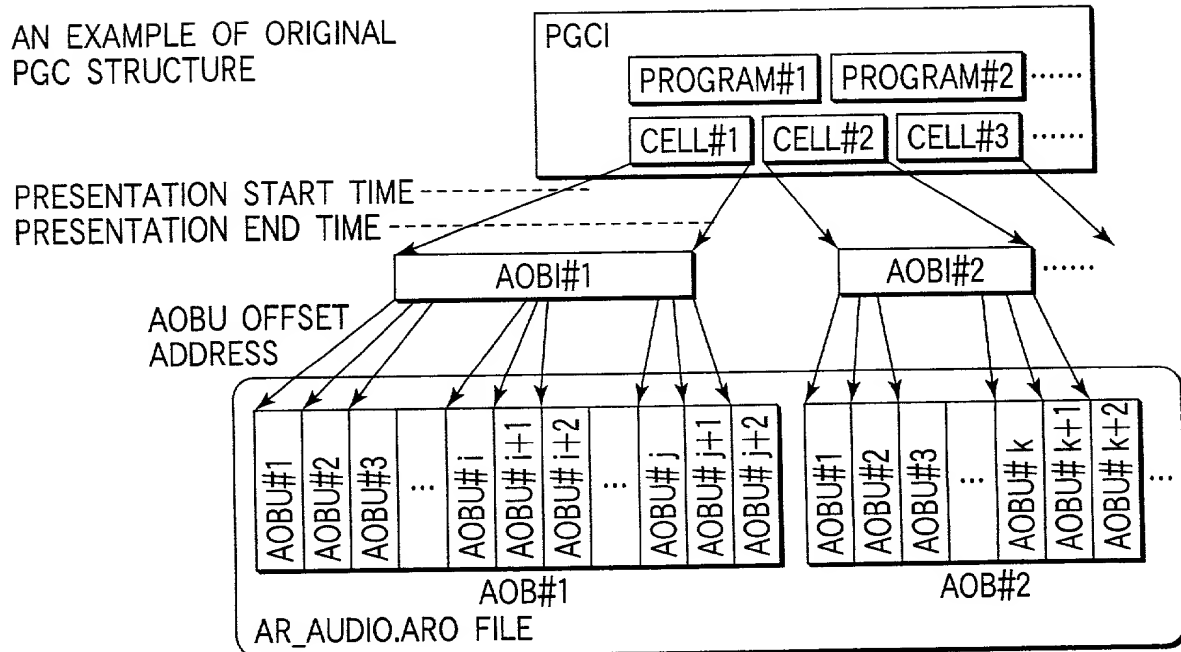


FIG. 41

AN EXAMPLE OF USER DEFINED PGC STRUCTURE

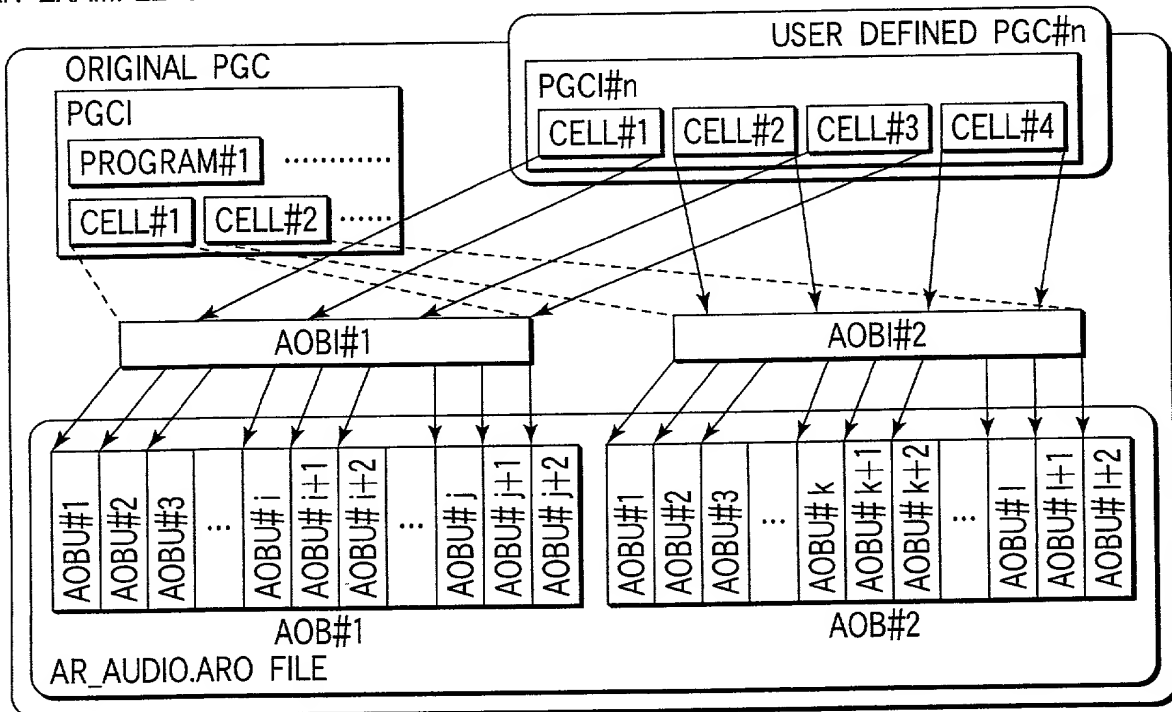
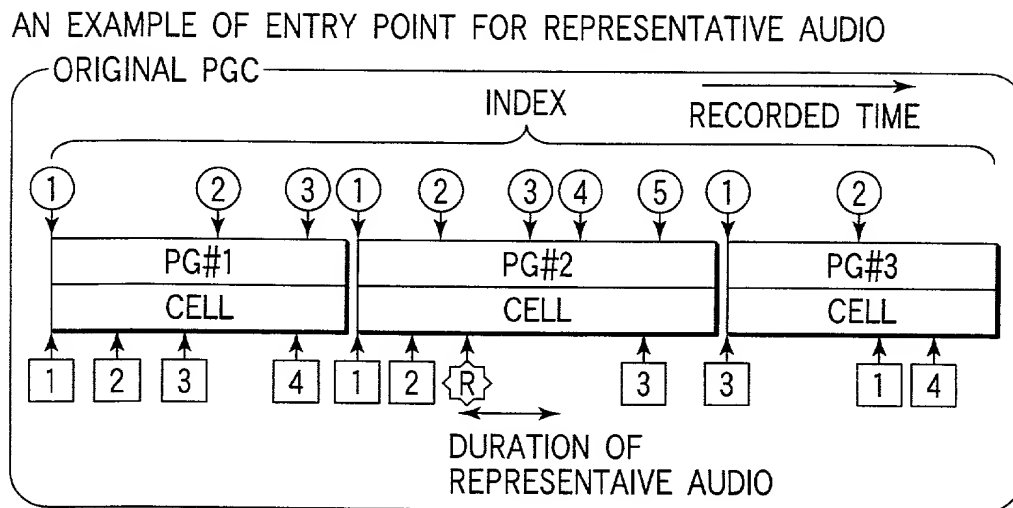


FIG. 42



- ① : ENTRY POINT FOR INDEX (i=1,2,3,...)
□j : ENTRY POINT FOR DISPLAY LIST (j=1,2,3,...)
⊞R : ENTRY POINT FOR REPRESENTATIVE AUDIO

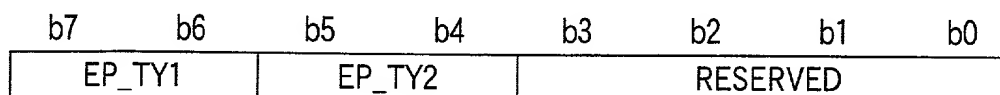
FIG. 43

C_EPI (TYPE D2)

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	EP_TY	ENTRY POINT TYPE	1BYTE
1 TO 6	EP_PTM	PTM OF ENTRY POINTS	6BYTES
7 TO 12	RA_DUR	REPRESENTATIVE AUDIO DURATION	6BYTES
TOTAL			13BYTES

EP_TY
DESCRIBES EP TYPE OF THIS ENTRY POINT



EP_TY1 ... '00b' SHALL BE DESCRIBED FOR TYPE D2 ENTRY POINT
EP_TY2 ... '11b' SHALL BE DESCRIBED FOR TYPE D2 ENTRY POINT

FIG. 44

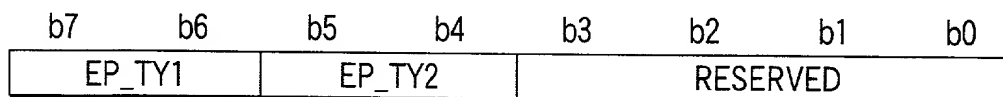
C_EPI (TYPE B1)

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	EP_TY	ENTRY POINT TYPE	1BYTE
1 TO 6	EP_PTM	PTM OF ENTRY POINTS	6BYTES
7	IDXN	INDEX NUMBER	1BYTE
8 TO 135	PRM_TXT	PRIMARY TEXT INFORMATION	128BYTES
TOTAL			136BYTES

EP_TY

DESCRIBES EP TYPE OF THIS ENTRY POINT



EP_TY1 ... '01b' SHALL BE DESCRIBED FOR TYPE B1 ENTRY POINT
EP_TY2 ... '01b' SHALL BE DESCRIBED FOR TYPE B1 ENTRY POINT

FIG. 45

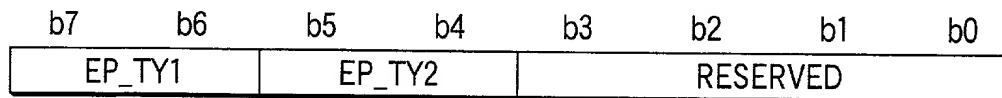
C_EPI (TYPE B2)

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	EP_TY	ENTRY POINT TYPE	1BYTE
1 TO 6	EP_PTM	PTM OF ENTRY POINTS	6BYTES
7	IDXN	INDEX NUMBER	1BYTE
TOTAL			8BYTES

EP_TY

DESCRIBES EP TYPE OF THIS ENTRY POINT



EP_TY1 ... '00b' SHALL BE DESCRIBED FOR TYPE B2 ENTRY POINT
EP_TY2 ... '01b' SHALL BE DESCRIBED FOR TYPE B2 ENTRY POINT

FIG. 46

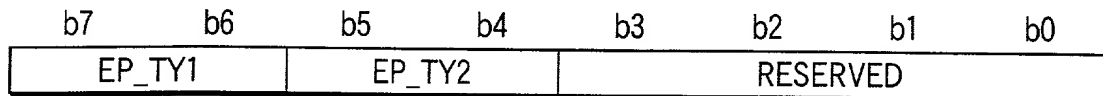
C_EPI (TYPE C2)

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	EP_TY	ENTRY POINT TYPE	1BYTE
1 TO 6	EP_PTM	PTM OF ENTRY POINTS	6BYTES
7	ASVOB_ENTN	ENTRY NUMBER OF ASVOB	1BYTE
8	HOME_DLISTN	HOME DLIST NUMBER	1BYTE
9	S_EFFECT	START EFFECT	1BYTE
10	E_EFFECT	END EFFECT	1BYTE
11 TO 12	MAX_DUR	MAXMUM DURATION TIME	2BYTES
13 TO 14	MIN_DUR	MINIMUM DURATION TIME	2BYTES
TOTAL			15BYTES

EP_TY

DESCRIBES EP TYPE OF THIS ENTRY POINT



EP_TY1 ... '00b' SHALL BE DESCRIBED FOR TYPE C2 ENTRY POINT

EP_TY2 ... '10b' SHALL BE DESCRIBED FOR TYPE C2 ENTRY POINT

FIG. 47

PGC_GI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	RESERVED	RESERVED	1BYTE
1	PG_Ns	NUMBER OF PGs	1BYTE
2 TO 3	CI_SRP_Ns	NUMBER OF CI_SRPs	2BYTES
TOTAL			4BYTES

PG_Ns

DESCRIBES THE NUMBER OF PGs IN THIS PGC

IN CASE OF USER DEFINED PGC, PG_Ns SHALL BE SET TO '0'

NOTE: THE MAXIMUM NUMBER OF PGs FOR THE ORIGINAL PGC IS '99'

CI_SRP_Ns

DESCRIBES THE NUMBER OF CI_SRPs IN THIS PGC

NOTE: THE MAXIMUM NUMBER OF CI_SRPs IS '999'

FIG. 48

PGI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	RESERVED	RESERVED	1BYTE
1	PG_TY	PROGRAM TYPE	1BYTE
2 TO 3	C_Ns	NUMBER OF CELLS IN THIS PG	2BYTES
4 TO 131	PRM_TXTI	PRIMARY TEXT INFORMATION	128BYTES
132 TO 133	IT_TXT_SRPN	IT_TXT SEARCH POINTER NUMBER	2BYTES
134 TO 141	REP_PICTI	REPRESENTATIVE PICTURE INFORMATION	8BYTES
TOTAL			142BYTES

PG_TY

DESCRIBES PROGRAM TYPE OF THIS PG

b7	b6	b5	b4	b3	b2	b1	b0
PROTECT	RESERVED						

PROTECT ... 0b: THIS PG IS NOT IN PROTECTED STATE
1b: THIS PG IS IN PROTECTED STATE

NOTE: WHEN A PG IS IN PROTECTED STATE, ALL THE AOBs REFERRED AND UTILIZED IN THE PRESENTATION OF THAT PG SHALL NOT BE TEMPORARILY OR PERMANENTLY ERASED.
PROTECT FLAGS SHALL NOT BE SET TO '1b' UNLESS ALL THE AOBs AND ASVOBs REFERRED BY THIS PG ARE IN NOMAL STATE

FIG. 49

REP_PICTI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
134 TO 135	ASVUN	ASVU NUMBER	2BYTES
136	ASVOB_ENTN	ASVOB_ENT NUMBER	1BYTE
137 TO 141	RESERVED	RESERVED	5BYTES
TOTAL			8BYTES

ASVUN

DESCRIBES THE ASVU NUMBER IN WHICH THIS REPRESENTATIVE PICTURE FOR TRACK EXISTS

ASVOB_ENTN

DESCRIBES THE ASVOB_ENT NUMBER IN WHICH THIS REPRESENTATIVE PICTURE FOR TRACK EXISTS

FIG. 50